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Working Paper

The immigration triangle: Quebec, Canada and the rest of the world

IZA Discussion Papers, No. 2624

Provided in Cooperation with:

IZA – Institute of Labor Economics

Suggested Citation: DeVoretz, Don J.; Pivnenko, Sergiy (2007) : The immigration triangle: Quebec, Canada and the rest of the world, IZA Discussion Papers, No. 2624, Institute for the Study of Labor (IZA), Bonn,
<https://nbn-resolving.de/urn:nbn:de:101:1-20080416403>

This Version is available at:

<https://hdl.handle.net/10419/33913>

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IZA DP No. 2624

**The Immigration Triangle:
Quebec, Canada and the Rest of the World**

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February 2007

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Discussion Paper No. 2624
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ABSTRACT

The Immigration Triangle: Quebec, Canada and the Rest of the World*

Quebec, as many other immigrant destination areas, has experienced difficulty in retaining its original set of newcomers. The paper addresses this issue of retention in terms of a brain circulation model under which immigrants enter a niche area (Quebec) and receive subsidized human capital benefits in the form of education, language training and skill certification. Under this model the decision to move or stay in Quebec or any niche area depends on the rate of return earned from this acquired human capital in the niche area (Quebec) or the rest of Canada (ROC). The individual move stay-decision in the relevant resident area is estimated for both the foreign-born and Canadian-born households with a logit model featuring demographic and economic arguments. The results suggest that an economic model of move-stay explains the internal migration decision for both the foreign-born and Canadian-born populations in Quebec and elsewhere in Canada.

JEL Classification: J61, J60

Keywords: immigration, emigration, triangle theory

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* Presented at Canadian Economic Association Meetings, Ottawa May 31st, 2003, National Metropolis Meeting, Montreal PQ, March 2004 and Atlantic Metropolis Atlantique, November 18th, 2004.

Introduction

Québec has historically struggled to keep its French language and culture alive in the larger Canadian and North-American contexts. It is largely in order to preserve the unique character of its society that Québec created its own provincial department of immigration in 1968. To further this goal of using immigration as a social policy tool Québec and Ottawa first signed an agreement relating to immigration in 1971.¹ The Lang-Cloutier Agreement allowed the presence of Québec “orientation officers” at Canadian immigration offices overseas. These agents were to promote Québec as a desirable destination province for prospective immigrants.

Going one step further, the 1975 Andras-Bienvenue Agreement invited Québec officials to participate in the recruitment and the selection of immigration candidates at the Canadian offices overseas. Three years later, the signing of the Cullen-Couture Agreement enabled Québec to play a major role in the selection of independent immigrants taking into account various economic and social factors to gauge their potential ability to integrate and prosper in the province. The selection was made through Québec’s own points system.²

¹ Under the BNA immigration had an ambiguous status with provincial responsibility in this area asserted at the beginning of the 20th century by British Columbia with a series of punitive head taxes on Asian immigrants. The House of Lords rejected these initiatives and immigration power than became a federal jurisdiction.

² Other provinces followed with separate accords under section 109(2) of the federal Immigration Act, 1976. New Brunswick, Nova Scotia, Prince Edward Island and Saskatchewan entered into agreements in 1978, and Newfoundland in 1979. Alberta was to follow suite in 1985 and British Columbia in the 1990’s. Ontario is the only province not to have an accord.

The purpose of all these above mentioned agreements was “to lay down the basis for cooperation in all areas relating to immigration and, in particular, to enable Quebec and Canada to participate jointly in the selection of persons who wish to settle permanently or temporarily in the province of Quebec.”³ In 1981 the Quebec department of immigration became the Ministry of Cultural Communities and Immigration to reflect Quebec’s interest in both the recruitment and settlement of immigrants

Demographic issues also propelled Quebec’s quest for a separate immigration selection policy. When Quebec’s fertility average fell well below the national average in the beginning of the 1980s and Quebec became increasingly prone to outward migration, immigration was seen as a possible tool to revitalize Quebec’s population.⁴ In an effort to counter these demographic trends the Canada-Quebec Accord Relating to Immigration and Temporary Admission of Aliens, or the McDougall-Gagnon-Tremblay Agreement, was signed to reinforce Quebec’s position on immigration.⁵ This new accord now enabled Quebec to select all of its **independent** immigrants and is still in effect today. Thus, we will briefly examine its various tenets.

One of the new objectives introduced by the accord was that Quebec was to receive immigrants in proportion to Quebec’s population in Canada as well as allowing immigrant integration based upon the distinct features of Quebec society.⁶ Thus, while Canada dealt with the criminality, security and health of applicants, as well as physically admitting them at various ports of entry, Quebec selected, received and integrated its immigrants. Ultimately, the federal government caps Quebec’s annual admissions since the federal government sets Canada-wide targets each November 1st and Quebec informs Ottawa of the number it will take.

The accord further stipulates that Canada must compensate Quebec for the costs of reception and the cultural and linguistic integration of its immigrants. The services offered by Quebec must be equivalent to those in other parts of the country, and must be accessible to all permanent residents, whether or not they have been selected by Quebec. On the other hand, Canada remains solely responsible for services concerning citizenship and can promote multiculturalism and services relating to multiculturalism.

As mentioned above, Quebec is responsible for selecting its principle applicants in the independent class of immigrants.⁷ It does so under a unique points system as outlined in Table 1. Where family class applicants are concerned, Canada’s role is to facilitate interviews conducted by Quebec within a set period of time. Quebec however, makes the final decision on their selection with the proviso that family class applicants must be sponsored by a permanent resident or a Canadian citizen. With regard to refugee class applicants, Canada processes all claims, and Quebec selects among applicants those that are more likely to integrate successfully into Quebec society.

³ CHAPTER X, 5. *Meech Lake Accord Report, 1987.*

⁴ For example, Quebec had the highest absolute number of out movers in the 1980-1995 period. *IMDB Profile Series*, January 2000.

⁵ This agreement was essentially based on the Cullen-Couture Agreement

⁶ Quebec can receive at a maximum its pro-rata share of the total number of immigrants admitted to Canada plus 5%,

⁷ Three principle immigrant entry points exist in Canada. These are the independent class, family reunification and refugee gateways.

The Accord also gives Quebec a new “explicit veto”⁸ on refugee admissions. Quebec must however receive a percentage of refugees at least equal to the total number of immigrants it has agreed to receive.⁹

In the “Other” category, Quebec is solely responsible for the selection of investors to participate in the investor program, and has its own regulations and policies. Canada ultimately admits the selected candidates.

Two fundamental questions emerge from this description of the political-institutional history of the various Quebec-Canada immigration accords. Has all of this effort affected the socio-economic characteristics of Quebec immigrants and ultimately their earnings performance? Moreover, has the selection mechanism and the resulting socio-economic characteristics of the immigrant pool selected affected the mover–stayer decision of Quebec immigrants?

Since the selection system is the crucial mechanism in pre-selecting immigrants we review the selection grids in Quebec and Canada to see if there is prima facie evidence to argue that different selection criteria are being used in the two jurisdictions.

Insert Table 1

Insert figures 1 and 2 approximately here

Figures 1 and 2 illustrate a second force which leads to the reported differential socio-economic characteristics. Quebec and the rest of Canada (ROC) receive a different mix of immigrants across entry gates. Over the period 1980-2001 Quebec had a greater percentage of their entrants in independent class (43% vs. 35%) and refugee (19% vs. 14%), and a smaller percentage in family class (30% vs. 36%) and other (8% vs. 15%). Thus, any effect derived from Quebec’s unique grid selection system is potentially reinforced by Quebec’s distribution of immigrants across entry gates.

In sum, we ask if the combination of a differential admissions policy and self selection by immigrants which led to varying proportions of immigrants across entry classes yielded a different stock of all foreign-born residents in Quebec and the ROC? Tables 2 and 3 shed light on this question.

Table 2 reports some socio-economic descriptors for the census-based data set we will actually use in our econometric model. It describes the Canadian-born population resident in all of Canada and Quebec as well as the Quebec-born movers to the rest of

⁸ In *Immigration: The Canada-Quebec Accord*, section D, Library of Parliament, BP-252E, 1991, reviewed 1998.

⁹ In addition, Quebec also must give prior consent to receive a number of foreign students and foreign visitors seeking medical treatment. On the other hand, Canada is responsible for admitting temporary foreign workers.

Canada (ROC). We will consider this Canadian-born population as our reference population or the population which is not affected by immigration policy or self selection when we later analyze the characteristics of resident foreign-born population in Quebec and Canada in Table 3.

Insert Table 2: Descriptive Statistics: Canadian-born 1996

We highlight the key socio-economic differences across these sub-populations of the Canadian-born residents circa 1996. Total income, wage income, marital status, language and employment status define the key differences between these sub-populations. For example, 88.8% of the Canadian-born population in Quebec spoke French only at home while 94.2% of the Canadian-born population report English as the only home language in the rest of Canada. Moreover, only 43.5% of Canadians in Quebec are married while over 50% of Canadians in the ROC are married. Total earned income by Canadians in the ROC is \$24,411 while it is only \$21,581 for Canadian born residents of Quebec. Finally, the percentage that reported they did not work in the relevant census period was 6 % greater for Canadians in Quebec (33.3%) than in the R.O.C. (27.0%).

These comparisons become generally more pronounced if we compare Canadian-born movers to the ROC and those Canadians who stayed in Quebec. In particular Quebec-born movers to the rest of Canada (ROC) are more likely to be never married (55.3%), have a university degree and speak English only. Moreover Quebec-born movers to the ROC were more likely to be employed and work in the professions than their staying cohort. In sum, the Quebec-born mover population to the ROC is unique in many dimensions and indicates that the internal migration process contains many self-selection features and of course is not affected by any immigration policy.

We now turn to each jurisdiction's foreign-born population which is affected by both self-selection between movers and non-movers and immigration policy in the various jurisdictions.

Insert Table 3: Descriptive Statistics: Foreign-born 1996

Table 3 reveals that Canada's foreign-born population is distinct in many dimensions when compared to either all the Canadian-born population or the Canadian-born population residing in Quebec. Comparing the total Canadian-born population to the total resident foreign-born population confirms a set of well-documented socio-economic characteristics. In fact, the Canadian- born population in Quebec is older: (42 vs. 38) and

less likely to speak French (3.8%), but is better educated and more likely to be married (59.4%) than its Canadian-born counterpart resident in all of Canada.

For the foreign-born population resident in Quebec new linguistic and income differences emerge from table 3 when we compare them to the population in the rest of Canada. Immigrant residents in Quebec are more likely to speak French only (26% vs. 0.2%) and earn \$4,035 less in wage income when resident in Quebec versus the ROC.¹⁰

What of the foreign-born who originally resided in Quebec and then moved circa 1996¹¹? In other words, they would have moved twice, once to Quebec and then on to the ROC. Would these movers reveal a different set of socio-economic characteristics if compared to those who chose to stay? In fact they are more highly educated (24% vs. 18% with university degrees) and less likely to speak French only (4.1% vs. 27.6%) than foreign-born stayers in Quebec. But if the foreign-born leave Quebec they earn slightly more than an immigrant who stays in Quebec.

In sum, the mobility status of Canada's populations reveals several significant differences in the socio-economic dimensions of these populations. First, foreign-birth status alone matters, and secondly, immigrant selection procedures accentuate the differences in the socio-economic dimensions of Canada's foreign-born populations between Quebec and the ROC. Next, internal mobility within Canada by either Canadians or the foreign-born affects their socio-economic characteristics with these movers earning substantially more than stayers in either ROC or Quebec. We now look to the existing literature to later guide our model construction.

II. Literature Review

Quebec's chronic demographic concerns of the last 20 years have generated a lively literature, which intertwines immigration issues with fertility and internal migration concerns.¹²

Decades ago the Quebec government understood that immigration is one key policy tool to stopping, or at least slow, the shrinkage of its population.¹³ Thus, one strain of the Quebec immigration literature addresses the retention issue. Edmonston (2002) has noted that unfortunately for Quebec, however, immigrants are more mobile than the Quebec-born population. In fact, a recent administrative data base report (Immigration

¹⁰ The total income values are identical.

¹¹ Mover and stayer categories are defined in Appendix II

¹² At 1.5 child per woman, Quebec's birth rate is amongst the lowest in the world given the standard replacement level of 2.1 (Ledent & Termote, 1999). Demographer Termote (1999) does not believe that government programs to encourage women to have more children over the next few decades will be successful. He however thinks that financial support to immigrant families could help (Drapeau, 1999), as immigrant women seem to have nearly double the fertility rate of other women (Tossou, 1998).

Data Base [IMDB], 2000, p. 18) reports that over 17% of skilled workers admitted to Quebec under the points grid had left (IMDB, 2000). In addition by 1995 almost half of the 22,595 business immigrants initially admitted to Quebec moved to another province and 17.5% of refugees had left. Nonetheless, Finnie (2000) remains optimistic in light of these observations when he argues that the situation could have been even worse.¹⁴ All the same, the overall number of immigrant residents in Quebec has declined by nearly 30% since 1991 (Gouvernement du Québec, 2002a). Moreover, given the fact that Quebec is unable to gain its pro-rata share of immigrant arrivals or maintain them after arrival it is predicted that Quebec's overall population is likely to decline at a much faster rate than the rest of Canada's (Suyama, 1998).¹⁵ This pre-occupation with retention in the Quebec immigration mobility literature will later motivate our mover-stayer model.

To compound this demographic dimension a linguistic dimension is added to the Quebec immigration literature. This issue arises since the declining number of immigrants, whether selected on a francophone basis or not, are switching to English programs of instruction. According to the *Commission scolaire de Montréal* (2001) – the Montreal school board, in order to comply with bill 101 immigrant children were required to enrol in French schools until they turned 17, when after that they could, and did, switch to English programs. Moreover, newer immigrants above age 18 went directly into English instruction at the college level.¹⁶ Reny (1999) blames the *Ministère des Relations avec les Citoyens et de l'Immigration* for selecting immigrants who abandon French as soon as they are admitted to Quebec. He notes that the majority of Quebec immigrants no longer come from Hispanic and Arabic countries, but mainly from Asia whose people generally arrive with a good knowledge of English.¹⁷ The debate over these linguistic numbers and the role of immigrants remains fierce but ambiguous after the release of the 2001 census data.

The Quebec government recently recognized these population and language concerns when it publicized the objectives of its three-year plan for immigration for the 2001-2003 period: These objectives include: (1) to increase the number of immigrants; 2) to increase the number of immigrants who know French; and 3) to select a greater proportion in the independent or worker entry class, with 20% from Western Europe and 50% from North Africa by 2003 (Gouvernement du Québec, 2002b).

¹⁴ He argues that Quebec deviates from the normal outcomes of a “size-mobility” rule, that is, smaller provinces have higher migration rates and vice-versa. The rule predicts that, since Quebec is smaller than Ontario, more people should leave, but this is not the case.

¹⁵ In fact, over the 1996-2001 period, 12% of newcomers to Canada settled in Quebec, primarily in the Montreal area, while Quebec represents 24% of the country's total population (Statistics Canada, 2002, p. 8).

¹⁶ To encourage a return on the investment made by providing French schooling to young students and to preserve French as a working language, the school board thus recommended that bill 101 be extended to make French compulsory in adult education centres and in colleges

¹⁷ He wonders why the selection of wealthy immigrants takes precedence over linguistic and cultural considerations that the government could more easily enforce.

¹⁹ Lin (1998) with a much more limited survey (1988-1990 Labour Market Activity Survey of Statistics Canada concludes that there was no significant statistical difference in the determinants of internal migration between comparable foreign- and native-born Canadians.

These immigration goals while appealing do not address Quebec's emigration problems. IMDB analysts (2000) reported that, for the 1980-1995 period, over 13% of immigrants had moved away from their original province of destination. Using the Canadian census Edmonston (2002) found that migration rates for the 1986-1991 period differed for the foreign-born and the Canadian-born in three ways: rates of in-migration and out-migration were higher for recent immigrants cohorts; rates of out-migration for the foreign-born were particularly high for Newfoundland, the Yukon and the Northwest Territories; the in-migration rates of the foreign-born were much higher for Ontario and British Columbia.¹⁹

Moreover, Finnie (2000) found that English speakers are twice as likely to leave Quebec as francophones. Consistent with Finnie's finding, an IMDB Profile (2000) states the following about Quebec immigrant arrivals:

Immigrant tax filers who reported ability in English at landing was the group which experienced the highest erosion from Québec. By 1995, Québec was left with over 24% fewer immigrant tax filers who spoke English only at landing. In contrast to this, Québec saw a net loss of only 3.7% of immigrants who reported only French language ability. (p. 37)

Anglophones are however not the only ones to leave Quebec: for the 1996-2001 period 19,200 Allophones left, mainly for Ontario (Statistics, Canada, 2002).

Edmonston (2002) also found a linguistic dimension to Quebec emigration. In fact for the 1986-1991 period, those native-born individuals without French were eight times more likely to leave Quebec, while immigrants who spoke English, but not French, "have a 2 to 5-fold increase in the odds of moving" (pp. 15-16). For the 1980-1995 period IMDB analysts also reported that 15% of immigrant movers were bilingual. Finnie (2000), using the Longitudinal Administrative Database (LIDS) for the 1982-1995 period, underlines the importance of "minority language" effects, and reports that English speakers in Quebec are twice as likely to move as francophones who share the same characteristics, while immigrants who spoke only French tended to leave Quebec at inordinately low rates, i.e., 3.7% for the 1980-1995 period (IMDB, 2000).²⁰ In addition to citing the language factor as a causal agent in moving the literature cites a host of demographic and economic variables: age, family status, area of residence, schooling, earnings, employment level, and access to employment insurance. The resulting econometric studies which employ these variables report a bewildering array of conclusions which are often difficult to rationalize with standard economic theory.²¹

²⁰ The exodus of English speakers from Quebec was further substantiated for the 1996-2001 period, with 30,500 individuals reporting English as their mother tongue leaving the province versus 4,300 in the previous 5-year period (Statistics Canada, 2002).

²¹ For example, while he expected and found that increases in labour force size are correlated with reductions in interprovincial migration, Edmonston (2002) concluded that, although consistent with prior results, his results for his set of economic variables did not have the predicted effects. Labour force status also produced unexpected mobility results. The provincial unemployment rate was positively related to interprovincial mobility, and those receiving employment insurance were more likely to leave the province, except for men between 20 and 24 years of age (Finnie, 2000). Finally, age, location and education had

III. Model

Insert Figure 3: Triangular Human Capital Transfers:

Given the speculative and counter intuitive results in the extant Quebec mover-stayer literature we now offer a more rigorous general immigrant mover-stayer model. In this fashion we will have testable hypotheses prior to examining the data. In Figure 3, we argue that there exist three possible alternative residences for a prospective immigrant to Canada. In short, there is the sending region A for those who choose not to immigrate but stay at home. If the immigrant plans to move from A then there exist two distinct entry points into Canada the representative entrepot country.²² These two destinations in the entrepot country include: a niche destination (Quebec) or a residual destination-rest of Canada- (ROC). In addition, movement occurs over two periods. In the first stage the immigrant chooses to move to the niche destination (Quebec) or the ROC. Once in either destination the resident immigrant enters stage two and may choose to either stay in the niche destination (Quebec) or move on to the rest of world, which includes the rest of Canada (ROC). Two examples of this triangular human capital migration include the simple paths of A-B-A or A-B-C and help illustrate the underlying logic of the model. The first path (A-B-A) would represent the simplest case of an initial move to the niche destination followed by a return move to the original sending country. The second path (A-B-C) represents an initial move to a niche destination followed by an onward movement to the rest of Canada. Permutations of this linear three-stage movement become even more complex when multiple moves (e.g. A-B-C-A) are considered. One simplifying assumption underlying the model is that the individual mover is myopic and makes the move or stay decision at A and then B with no multiple period strategies in mind.²³

Agents in the Niche Country: Quebec:

After the immigrants enter in the niche country two types of agents, public and private, appear. The niche public agent offers incentives to enter the niche portion of the

more conventional outcomes on interprovincial movers. Finnie (2000) found that age was negatively related to mobility, with younger people being more prone to moving. Edmonston (2002) corroborated this finding, and the IMDB (2000) specified that immigrants 25 to 44 at landing were more likely to move. Married men and women were less likely to move than singles, and even less so when they had children (Finnie, 2000). People from rural areas were less mobile than their counterparts from cities; this held true for all but men 20 to 24 years of age (Finnie, 2000). For the 1980-1995 period 20% of immigrant tax filers with a graduate university degrees had moved (IMDB, 2000), and, consistent with this figure, Edmonston (2002) and reported that schooling had a positive effect on the odds of interprovincial migration.

²² An entrepot country will be defined in detail below. Suffice it to note that it is a unique destination region which supplies subsidized human capital which later may entice the immigrant to stay or leave.

²³ For example, the initial movement from the sending to entrepot country can next result in an onward move to the rest of Canada, followed by a final move back to the original sending country. This example essentially describes Hong Kong émigrés to Quebec who originally went to Quebec then moved to British Columbia and later returned to Hong Kong as Canadian citizens. They now are able to easily enter a new destination China, as Canadian citizens resident in Hong Kong.

entrepot country and later in period two offers a public good. These actions will influence the decision to reside in the niche country-Quebec and perhaps remain there. In addition, the private or volunteer settlement agent in the niche area offers the recent arrival various forms of specific human capital, which will also affect the stay-move decision in period two.

Period one: Public Agent in the niche area

Any leaver from country A destined to a North American entrepot region has a choice to move to a niche area - Quebec or the rest of Canada.²⁴ The public agent can induce this prospective immigrant to move to the niche area as opposed to the rest of the entrepot country by altering the entrance requirements (see Table 1) and providing a different bundle of subsidized public goods to ease the integration of immigrants in the niche area.

Period one: Private Settlement worker in the niche area

After arrival the recent immigrant is offered subsidized general human capital training (language, knowledge of labour market channels, cultural conventions) and specific human capital (retraining for certification, access to modern technology) by a settlement worker in either the niche region or the R.O.C. The agent's goal in either the niche area or ROC is to increase the probability that the recent immigrant will stay in their particular area at the end of period 1.²⁵ As Borjas and Bratsberg (1996) have shown, acquisition of different types of specific human capital can increase the probability that a portion of the highly skilled immigrant arrivals will leave (or stay). Thus, this settlement worker's activity can perversely affect the staying probability and in addition may produce distributional consequences on the quality of those who stay and those who leave if they offer the mover more general capital than specific capital. For instance, if the niche area settlement worker offered English language training and job search skills to the immigrant this would lead to a higher probability of leaving Quebec at the end of period 1. Presumably if French language was offered with skill upgrading and certification for only the local market then this should increase the probability of staying in Quebec. Depending on the skill set offered, Borjas and Bratsberg (1996) argue that the best (or weakest) of the highly skilled immigrant arrivals may in turn move on (to the rest of Canada) at the end of period 1. Moreover, we argue that the direction of any move, and the quality of the highly skilled sojourner, ultimately depend on the rates of return earned from the newly acquired human capital in Quebec or the ROC.

In sum, the niche settlement worker's activities in period one can increase (decrease) the probability of staying (leaving) for the best (or weakest) immigrant arrivals. Moreover, only one outcome in three (at end of period 1), namely staying, is the

²⁴ For simplicity we assume that the immigrant from country A chooses an entrepot country.

²⁵ The settlement worker by definition provides human capital to increase the productivity of all immigrant arrivals in the entrepot society and reduce the risk of return migration. Settlement workers may also have altruistic motives, namely to ease the immigrant's integration into society. However, in entrepot countries such as Australia, Canada, Germany, and especially Israel, government subsidies to private altruistic agencies is predicated on increasing the staying probability of the recent arrival and to increase the immigrant's contribution to the society. To this extent this governmental motive is not altruistic.

preferred goal of the settlement agent.²⁶ However, the benefits conferred may act perversely to induce the resident immigrant to leave for the ROC or home.

Period two: Public Agent in Niche area or ROC

If the immigrant chooses to stay for a second period in either the niche area or the ROC, a second public agent appears and offers a public good to the immigrant, namely citizenship, which a recent immigrant can free ride on. In essence, if the immigrant remains in either part of Canada in period 2 and ascends to citizenship, then the immigrant's job market widens and the mobility costs of moving to the rest of the world falls.²⁷

In sum, the model at this stage can predict the probability of staying in either Quebec or ROC in the entrepot country as agents provide human capital and public goods in periods 1 and 2. What ultimately determines whether immigrants stay in the entrepot destination or move on to the ROC or rest of the world is the rate of return of their acquired capital in the three settlement regions and the immigrant's stage in the life cycle.

Insert Figure 4: Decision Tree for Foreign-born Mover to Niche or ROC

Figure 4 outlines a specific decision tree for a prospective foreign-born immigrant to Canada and illustrates the two stages and separate periods within each stage which capture the outlined actions of the agents. In this case study at Stage I the stock of the foreign-born for the entire entrepot destination reported in the 1996 Census (5% sample) from all source countries between 1984-1991 was 24,377. Of that number of immigrant arrivals 3,783 choose Quebec (the niche area) and the remainder or 20,594 choose the ROC.²⁸ We now follow the 3,783 who choose the niche area-Quebec-to stage 2. Stage 2 is divided into two periods which corresponds to our model's intervals and outlines the move-stay decision at the end of periods 1 and 2 respectively. At the end of period I the majority of the foreign-born stock originally in residence (3,539) stay and 244 move out of the niche area. At the end of 1996 or period II the majority again stay (3,491) while 48 move on. Again referring to our model we would anticipate that entrants to the niche area and the subsequent stayers and movers would self select given the differential incentive structures of the agents in the niche and ROC.

²⁶ The other two outcomes are inferior for the settlement worker, but not necessarily for the potential émigré. In addition, the model predicts that only those types of human capital acquisition which enhance the rate of return in the entrepot country relative to the ROW or sending region will enhance the probability of staying in the entrepot niche areas.

²⁷ For example Canadian citizenship is required for all Canadian federal jobs. In addition, citizenship allows the foreign-born Canadian citizen to obtain a TN visa to work in the USA. On the other hand the mobility costs for immigrants living in Canada without Canadian citizenship are the waiting and legal costs to obtain a permanent visa (E type) for the USA. These are considerable costs since the waiting period may be indefinite. However, with Canadian citizenship a NAFTA visa can be immediately obtained. Furthermore, there is no quota for this NAFTA visa (unlike the H1-B visa) and thus the probability of entry is certain if limited side conditions are met.

²⁸ See Appendix II for our variable definitions and the logic of selecting this stock for the resident foreign-born in Quebec circa 1996.

Insert Figure 5

In a similar fashion the Canadian-born face a (smaller) decision tree within Canada (figure 5). For Canadian-born Quebec residents they can either stay or leave for the ROC. Alternatively Canadians in the ROC can stay or move to Quebec. We argue that a similar set of incentives will induce the move-stay decision for the Canadian born and thus will ultimately test the model for both immigrants and the Canadian-born to seek how robust the model is.

IV. Results

Foreign-born Population

Insert Table 4

Following the logic of the outlined model we divide our sample set into two sub-populations, the foreign-born and the Canadian-born and employ a logistic regression model to simulate the sequential decision process described in the tree diagram (figure 4). For each decision period table 4 reports regression coefficient estimates and associated Wald statistics.

At the first stage we estimate the probability of an immigrant landing in Quebec as opposed to the rest of Canada (ROC). In short, the dependent dummy variable takes the unit value if the foreign born individual who arrived to Canada in 1984-1991 was a Quebec resident in 1991, or zero – for foreign-born ROC residents²⁹. Then, following the “stayers” branch of the decision tree, we estimate subsequent probabilities of staying in Quebec in 1995 and in 1996.

Our model indicates that age negatively affects the immigrant’s choice of Quebec as an initial destination point in period 1. However, if the immigrant did initially choose Quebec then aging in Quebec increased the probability of staying in Quebec. If the foreign-born head of household is married this reduces his/her probability of choosing Quebec as the initial destination and reduces the probability of staying in Quebec if the initial choice was Quebec. Education, as well as age, has a mixed affect on the foreign-born mobility patterns. In short, increased educational credentials are positively associated with probability of choosing Quebec as a destination province, but have a negative effect on the probability of staying during subsequent periods.

The effect of language is as expected and the results confirm that Anglophone immigrants are less likely to choose Quebec as their province of destination, and, if they did, they have a lower probability to stay there overtime. The effect of an immigrant speaking French at home has the opposite affect on the initial destination choice and subsequently staying. Finally, if an immigrant defines him(her)self as skilled or a

²⁹ Here we assume that for all of 1984-1991 arrivals province of landing was Quebec. Because our sequential decision model requires a large sample size at the first stage, we had to select a seven-year period of immigration rather than just 1991 to create a sufficiently large stock of arrivals. In attempt to reduce this immigration period we considered stacking the 1991 and 1996 Censuses, but it did not provide a meaningful gain in sample size since the intake of immigrants in 1982-85 was approximately half the 1987-90 inflow.

professional this (generally) reduces the odds of choosing Quebec as a destination or staying there after arrival.³⁰

In order to estimate the effect of income on the probabilities of staying we constructed a new variable: the percentage change in income differential (INCDIFPC). According to our hypothesis, individuals base their decisions to move from Quebec to the ROC on their assessment of their potential income gain. INCDIFPC is the difference between the logarithms of expected income in ROC and expected income in Quebec. For Quebec residents in 1991 we simulated expected earnings in the ROC using the vector of coefficients of log-linear income function estimated on the sample of ROC residents in 1991. Expected earnings in Quebec were simulated using the vector of coefficients of log-linear income function estimated on the sample of Quebec residents in 1995.

Our results displayed insignificant effects derived from the potential income gain derived from a prospective move to the ROC on the probability of staying in Quebec. One possible explanation for this could be the heterogeneity of income structure across the provinces. We addressed this problem by disaggregating the ROC into three parts: Ontario, the prairies (Alberta, Manitoba and Saskatchewan) and British Columbia. We repeated the simulation for the potential income gain, and subsequent estimation of probability of staying using each of these regions as in our ROC model. The estimated income function coefficients displayed in Table 5 suggest that various human capital and demographic characteristics have different income generating potential across three ROC regions.

Insert Table 5

Table 6 reports the estimated LOGIT model coefficients for the probability of staying in Quebec for 1984-1991 immigrants and their Canadian born cohort. The expected income gain from moving to Ontario or British Columbia from Quebec had a significant negative effect on probability of staying. Only in Quebec-Prairies case was this effect found to be positively significant for Quebec émigrés.

Insert Table 6

Canadian born

The decision tree for Canadian born is presented in figure 5. At the first stage we estimate the probability that a randomly chosen Canadian born person was a resident of Quebec in 1991. Probabilities of staying in Quebec across the next two periods (stage 2) are defined in the same way as for the foreign born in figure 4.

In general, our model predicts a similar pattern of results for the move-stay decision for both the Canadian-born and foreign-born population groups. However, the results for the Canadian-born differ in two minor respects. First, being legally married has a positive effect on the probability of staying in Quebec at stage 2. Second, *ceteris*

³⁰ This does not hold for professionals resident in Quebec in 1996.

paribus a skilled Canadian born worker is more likely to stay in Quebec in period 1 of stage 2 than a foreign-born worker.

Simulation of probabilities

An alternative method to interpret the logit results is to explore the results under a simulation experiment. Under this technique we use the estimated logit coefficients and the associated mean values of the explanatory variables to simulate the probabilities of staying in Quebec at different points in time. The simulation results are presented in Table 7 and provide an indirect test of the accuracy of our model.

Insert Table 7

Our model predicts that the average Canadian born had 39 percent chance to reside in Quebec in 1991, whereas the average immigrant had a simulated probability of 13.2 percent to settle in Quebec upon arrival. These simulations when compared to the actual distributions indicate that our model overestimated the probability of a Canadian being resident in Quebec since only 28% of Canadian-born actually lived there in 1991. However, the simulated distribution of the immigrant population is more accurate since 19% of the foreign-born initially settled in Quebec for our research period.

Ontario as a niche area

Insert Table 8

Ontario has become the primary province of choice for immigrants in the 1990's with over 50 percent of Canada's immigrants currently entering that province. Thus, we test our model for this province to detect any distinct staying power in this province for either immigrant arrivals or the Canadian-born. In short, we ask are Ontario and Quebec distinct immigrant reception areas in Canada?

Using the Ontario data we test our model following the familiar path down the decision tree as shown in figure 5. The estimated regression coefficients for our model are reported in Table 8. We will concentrate our discussion only on the patterns that differ between the two provinces foreign-born populations. From amongst the age, gender and marital status variables that affect the move-stay decision for the foreign-born only the marital status variable reverses its signs between the two provinces. There also exists a minor but important difference between the provinces university degree educated foreign-born. In Quebec a university degree increased the probability of a foreign-born resident to leave in 1996. The opposite situation held in Ontario where a foreign-born resident with a higher education would more likely stay in the province.

Finally, our results in Ontario case strongly support our hypothesis that a positive expected income gain from moving to the rest of Canada would negatively affect the probability of staying in the niche province. For both the Canadian born and foreign-born

populations resident in Ontario the stage 2 the coefficient for INCDIFPC is negative while the signs for Quebec were mixed.

Insert Table 9 here

Table 9 presents the simulated probabilities of staying in Ontario at different periods for the average Canadian and foreign born persons and is a check of the overall accuracy of models predictive power for Ontario. Our model accurately predicts that 56.7 percent of immigrants chose Ontario as province of destination, and 26.3 percent of the Canadian born lived in Ontario in 1991. The probability of an immigrant staying in Ontario is 97.8% vs. 98.5% for a Canadian-born staying in Ontario.

Summary and Interpretation of Results

Insert tables 10 and 11 here

Here we exploit the simulation methodology to portray the different probabilities of staying or moving for prototypical foreign-born and Canadian born households over their lifetime. Tables 10 (11) present simulated probabilities of staying (moving) for both married and unmarried households in Ontario and Quebec. Now the differences in the probability of moving clearly emerge. If we move across any row in table 10 we are holding the age group constant by varying the marital and foreign-birth status for either Quebec or Ontario residents. If we focus on the young (20-35) in Quebec we observe that the probability of a foreign-born household moving to the ROC regardless of marital status, is four times greater than for other age groups. If we move to the Ontario case of those aged 25-35 the probability of moving out of Ontario is less (more) for the foreign-born (Canadian-born) than in Quebec.

If we age either provinces' populations and move across the 36-65 year old groups than the Canadian-born populations in either province become less mobile while the foreign-born populations probability of moving generally remain constant as they age.

Marital status also affects the probability of moving across these population groups. In general being unmarried reduces the probability of moving for the foreign-born in either Ontario or Quebec. For the Canadian-born resident in either Quebec or Ontario the probability of moving generally rises for the unmarried.³¹

In sum, socio-demographic forces of age, place, marital status and foreign-birth status all condition the probability of moving once an immigrant settles in Canada. But is there an economic gain over lifetime from all this simulated movement? We construct simulated age earnings profiles for mover and stayers to answer this question.

Insert Figure 6: Age earnings Profile

³¹ Obviously being unmarried implies divorce as well as never married and can explain these results.

Figure 6 presents the results of simulating the lifetime earnings patterns (1996 dollars) of the foreign-born and Canadian-born in Quebec circa 1991, and for those who were also identified in 1995 as movers or stayers. Several patterns emerge from Figure 6. First, all groups follow a concave age-earnings profile (except perhaps movers) as predicted by standard human capital theory. Next, movers, regardless of their birth status outperform stayers. The largest gain in earnings from moving appears in the Canadian-born population at approximately age 50 with a \$6,000 annual (1996 dollar) gain from moving. For the foreign-born group the gain from moving is maximized at age 42 with a much smaller \$2,000 increment. Clearly, the Canadian-born population has a greater incentive to move within Canada than the foreign-born.

Beyond the simulation results several additional conclusions are also evident. First, most people in Canada, Canadian-born or foreign-born do not move within Canada. Secondly, for those who do move within Canada there are positive income returns. However, the returns are modest to the foreign-born household so the motivation must be more than just economic to move within Canada. For the Canadian-born the economic incentive to migrate within Canada is sufficiently large as to be the principle motivation to move.

Insert Figure 7

Figure 7 provides a calculation of the present value income gains to illustrate the above assertion. As already noted there are major differences by foreign-birth status on the incentives to move. For example, if a foreign-born Canadian moves at age 30 the first year's income gain relative to a stayer is only \$500 and this annual gain peaks at age 40 with a \$1700 gain. Over his/her lifetime the foreign-born mover's income gain equals a total discounted value of \$30,705 and would probably cover the economic costs of a move. However, if a foreign-born person contemplates movement after age forty-five the total gain is extremely modest and may not cover the costs of the contemplated move. A Canadian-born mover who moves at age 30 to 55 would increase his/her income by in \$88,024 from a move. This amount would no doubt cover the economic costs of moving.³²

In sum, our triangle model of niche attachment in Canada works equally well for Ontario and Quebec suggesting that most people stay in their province of residence. If they do leave language and potential income gain condition the probability of leaving in either province for both their foreign and Canadian-born populations.

³² However, even these gains are trivial when one compares them to the average gains for a Canadian mover between Canada and the United States. DeVoretz and Iturralde (2000a) report an average gain of \$95,000 between a mover to the United States and stayer in Canada. This huge difference no doubt is due to the fact that mostly highly educated Canadians move to United States.

References

- Borjas, G. and Bratsberg, B. 1996. "Who Leaves: The Outmigration of the Foreign-born", *Review of Economics and Statistics* 78:165-76.
- Commission scolaire de Montréal (2001). *Il faut étendre la Loi 101 aux adultes*. <http://www.lesenfantsdecole.com/commentaires/Loi%20101.htm>, 11 janvier.
- DeVoretz, D. and C. Itturalde. 2000a. "Probability of Staying in Canada", RIIM Working Paper 00-06.
- _____. 2000b. "Why do the highly skilled stay in Canada", *Policy Options* March: 59-63 .
- Drapeau, J. (1999) *Le Québec devra accueillir trois fois plus d'immigrants – Notre taux de fécondité de 1,5 enfants par femme est l'un des plus bas au monde*. *Le Soleil*, 11 avril.
- Edmonston, B. (2002) *Interprovincial migration of Canadian immigrants*. Vancouver Centre of Excellence Working Paper 02-10.
- Finnie, R. (2000) *The who moves? A panel logit model analysis of interprovincial migration in Canada*. Statistics Canada 11F0019MPE No. 142.
- Gouvernement du Québec (2002a) *Immigrants selon la catégorie d'immigrants, Québec, 1980-2001*. Institut de la statistique. http://www.stat.gouv.qc.ca/donstat/societe/demographie/migrt_poplt_imigr/605.htm
- _____. (2002b) *Planification de l'immigration 2001-2003 – Faits saillants*. http://www.immigration-quebec.gouv.qc.ca/français/publication/pdf/Planif_2001_03_Faits_saillants.PDF
- Immigration Data Base Profile Series (2000) *The interprovincial migration of immigrants to Canada*. Minister of Public Works and Government Services Canada.
- Institut de la statistique Québec (2002) *Immigrants selon la catégorie d'immigrants, Québec, 1980-2001*. Gouvernement du Québec.
- Ledent, J. & Termote, M. (1999) *L'immigration et la croissance des régions métropolitaines: implications politiques*. *Policy Options Politiques*, May.
- Lin, Z. (1998) *Foreign-born versus native-born Canadians : A comparison of their inter-provincial labour mobility*. Statistics Canada 11F0019MPE No. 114.
- Reny, A. (1999) *La francisation des immigrants est en déclin*. *Le Devoir*, 1^{er} octobre.

Statistics Canada (2002) *2001 Census: analysis series – Profile of languages in Canada: English, French and many others*. Catalogue no. 96F0030XIE2001005.

Suyama, N. (1998) *Quebec's Achilles heel: Demographics*. Australian Key Centre for Cultural and Media Policy Conference Papers.

Termote, M. & Ledent, J. (1999) *Perspectives démologiques du Québec et de la région de Montréal à l'aube du XXI^e siècle. Implications pour le français d'usage public*. Rapport soumis au Conseil de la langue française, 15 septembre.

<http://www.clf.gouv.qc.ca/Publications/Pub151/B151.pdf>

Tossou, A.A. (1998) *Immigration internationale et apport démographique induit par les naissances des immigrants dans la région métropolitaine de recensement de Montréal entre 1971 et 1991*. Communication présentée au 66^e Congrès de l'Acfas, Université Laval, Québec, 11-15 mai.

Table 1: Common features of Canada and Quebec Selection Grid for Independent Applicants

<i>Criteria</i>	<i>Maximum Points Canada</i>	<i>Maximum Points Quebec</i>
1. Schooling	25	11
2. Assured Employment	15	15
3. Work Experience	21	10
4. Family (or friend) in Canada (Quebec)	(5) ¹	
5. Age	10	10
6. Knowledge of English (French) for Canada (Quebec)	16	18
English (French) for Quebec (Canada)	8	6
7. Spouse's schooling	(5)	5
Total	100	78
Pass	75 ³	58 ²

Notes:

1. Parentheses indicate that score can be granted for either criterion but not both criteria.
2. Pass score if married, 50 otherwise
3. 70 points prior to 2002, 75 in 2002

Table 2. Descriptive statistics: Canadian born, 5% sample of Census of Canada 1996

	Canadian born		Canadian born, 1991				Canadian born Quebec residents, 1991			
	Frequency	Percentage	Quebec		Rest of Canada		Stayed in Quebec, 1995		Moved to RoC, 1995	
			Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Total (16 years and over)	483674	100	136826	28.29	346848	71.71	135274	98.87	1552	1.13
Age										
Mean	42.24		42.96		41.96		43.03		36.53	
Sex										
Female	248626	51.40	70841	51.80	177785	51.30	70032	51.80	809	52.1
Male	235048	48.60	65985	48.20	169063	48.70	65242	48.20	743	47.9
Marital status										
Divorced	37439	7.74	13044	9.50	24395	7.00	12928	9.60	32	9.28
Legally married	242177	50.07	59490	43.50	182687	52.70	58879	43.50	104	30.14
Separated	14654	3.03	3290	2.40	11364	3.30	3235	2.40	8	2.32
Never married	162804	33.66	52890	38.70	109914	31.70	52163	38.60	191	55.36
Widowed	26600	5.50	8112	5.90	18488	5.30	8069	6.00	10	2.90
Highest degree, certificate or diploma										
High school and lower	290245	60.01	84678	61.90	205567	59.30	84042	62.10	636	40.97
Diploma or certificate (above high school)	133070	27.51	36308	26.50	96762	27.90	35891	26.50	417	26.87
Bachelor	41579	8.60	10850	7.90	30729	8.90	10511	7.80	339	21.84
Bachelor plus (bachelor+, masters, medical)	17384	3.59	4616	3.40	12768	3.70	4471	3.30	145	9.34
Earned doctorate	1396	0.29	374	0.30	1022	0.30	359	0.30	15	0.97
Home Language										
English only	339402	70.17	12514	9.10	326888	94.20	11457	8.50	1057	68.11
French only	134216	27.75	121497	88.80	12719	3.70	121044	89.50	453	29.19
Both English and French	2188	0.45	1197	0.90	991	0.30	1167	0.90	30	1.93
Other	7868	1.63	1618	1.20	6250	1.80	1606	1.20	12	0.77
Occupation (1991 NOC)										
Professional (includes managerial)	96684	19.99	26356	19.30	70328	20.30	25859	19.10	497	32.02
Skilled	77648	16.05	20082	14.70	57566	16.60	19898	14.70	184	11.86
Low Skill	170014	35.15	44758	32.70	125256	36.10	44217	32.70	541	34.86
Did not work since January 1, 1995	139328	28.81	45630	33.30	93698	27.00	45300	33.50	330	21.26
Total income										
Mean \$	23610.54		21581.33		24411.04		21529.39		26108.43	
Wage income										
Mean \$	16689.31		15233.29		17263.68		15172.93		20494.64	

Table 3. Descriptive statistics: foreign born, 5% sample of Census of Canada 1996

	Foreign born (arrived 1984-1991)		Foreign born, 1991				Foreign born Quebec residents, 1991			
	Frequency	Percentage	Quebec		Rest of Canada		Stayed in Quebec, 1995		Moved to RoC, 1995	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Total (16 years and over)	24377	100	3783	15.50	20594	84.50	3539	93.60	244	6.40
Age										
Mean	38.31		37.76		38.41		37.88		35.92	
Sex										
Female	12655	51.90	1899	50.20	10756	52.20	1777	50.20	122	50.00
Male	11722	48.10	1884	49.80	9838	47.80	1762	49.80	122	50.00
Marital status										
Divorced	986	4.00	214	5.70	772	3.70	199	5.60	15	6.10
Legally married	14488	59.40	2102	55.60	12386	60.10	1950	55.10	152	62.30
Separated	860	3.50	144	3.80	716	3.50	131	3.70	13	5.30
Never married	7073	29.00	1195	31.60	5878	28.50	1134	32.00	61	25.00
Widowed	970	4.00	128	3.40	842	4.10	125	3.50	3	1.20
Highest degree, certificate or diploma										
High school and lower	13859	56.90	2097	55.40	11762	57.10	1978	55.90	119	48.80
Diploma or certificate (above high school)	6012	24.70	963	25.50	5049	24.50	899	25.40	64	26.20
Bachelor	2732	11.20	389	10.30	2343	11.40	358	10.10	31	12.70
Bachelor plus (bachelor +, masters, medical)	1521	6.20	267	7.10	1254	6.10	244	6.90	23	9.40
Earned doctorate	253	1.00	67	1.80	186	0.90	60	1.70	7	2.90
Knowledge of Official Languages										
English only	18249	74.90	850	22.50	17399	84.50	731	20.70	119	48.80
French only	1020	4.20	985	26.00	35	0.20	975	27.60	10	4.10
Both English and French	2628	10.80	1667	44.10	961	4.70	1564	44.20	103	42.20
Neither English nor French	2480	10.20	281	7.40	2199	10.70	269	7.60	12	4.90

Home Language										
English only	7576	31.10	468	12.40	7108	34.50	413	11.70	55	22.50
French only	887	3.60	802	21.20	85	0.40	787	22.20	15	6.10
Both English and French	51	0.20	30	0.80	21	0.10	28	0.80	2	0.80
Other	15863	65.10	2483	65.60	13380	65.00	2311	65.30	172	70.50
Occupation (1991 NOC)										
Professional (includes managerial)	4113	16.90	591	15.60	3522	17.10	543	15.30	48	19.70
Skilled	3135	12.90	404	10.70	2731	13.30	370	10.50	34	13.90
Low Skill	9620	39.50	1261	33.30	8359	40.60	1194	33.70	67	27.50
Did not work since January 1, 1995	7509	30.80	1527	40.40	5982	29.00	1432	40.50	95	38.90
Total income										
Mean \$	17304.66		14173.38		17879.86		14108.06		15120.86	
Wage income										
Mean \$	13086.88		9677.43		13713.18		9618.67		10529.70	

Table 4. Quebec: LOGIT model coefficients (Wald statistics)

Variables	1991 Stage 1		1995 Stage 2, period 1		1996 Stage 2, period 2	
	CB	FB	CB	FB	CB	FB
AGEP	.001 (3.103)	-.003 (3.483)	.023 (103.023)	.016 (5.961)	.030 (36.812)	.017 (1.387)
FEMALE	-.002 (.005)	-.092 (5.279)	-.011 (.029)	.079 (.272)	-.244 (3.502)	-.031 (.009)
MARRIED	-.391 (208.285)	-.147 (11.544)	.036 (.268)	-.404 (5.821)	.390 (6.829)	-.724 (3.656)
DIPL	.070 (5.187)	.167 (11.760)	-.261 (10.752)	-.139 (.583)	-.128 (.604)	-.400 (1.005)
BACH	.226 (20.120)	.007 (.012)	-.941 (102.631)	-.392 (2.684)	-.837 (18.110)	-1.365 (10.146)
BACHPL	.207 (7.862)	.166 (3.521)	-.967 (58.345)	-.569 (4.341)	-1.245 (24.755)	-.607 (.832)
PHD	.722 (11.409)	.769 (17.288)	-1.013 (8.541)	-.685 (2.202)	-1.926 (12.802)	-2.309 (9.061)
HLNE	-1.814 (937.968)	-1.048 (385.985)	-2.989 (52.566)	-.387 (4.272)	-3.071 (9.319)	-.296 (.574)
HLNF	3.704 (3872.116)	3.916 (1121.785)	.146 (.124)	1.558 (25.854)	-.672 (.446)	2.596 (6.465)
HLNEF	1.656 (266.936)	1.989 (47.724)	-1.915 (17.182)	-.114 (.023)	-2.582 (5.807)	5.022 (.063)
PROF	.050 (1.753)	-.303 (22.247)	.012 (.023)	-.206 (.923)	.020 (.013)	.419 (.729)
SKL	-.093 (6.403)	-.312 (22.934)	.156 (2.443)	-.409 (3.784)	-.046 (.054)	-.527 (1.582)
INCDIFPC	-	-	.115 (14.623)	.034 (.350)	-.020 (.138)	-.069 (.353)
Constant	-1.350 (452.507)	-1.420 (520.793)	4.707 (126.81)	2.441 (77.129)	6.313 (38.693)	4.421 (51.229)

Table 5. Estimated log-linear income function for 1984-1991 immigrants to Canada (FB) and Canadian born (CB)

	Quebec		Ontario		Prairies		British Columbia	
	FB	CB	FB	CB	FB	CB	FB	CB
	Estimated OLS coefficients (t-statistics)							
(Constant)	6.343 (77.108)	6.926 (191.889)	6.229 (62.135)	6.710 (230.684)	6.874 (32.540)	6.530 (182.441)	6.387 (32.814)	7.042 (133.612)
AGEP	0.122 (29.285)	0.086 (79.200)	0.128 (25.271)	0.099 (100.948)	0.096 (9.082)	0.092 (68.113)	0.117 (11.855)	0.087 (55.070)
AGESQ	-0.001 (-29.988)	-0.001 (-63.967)	-0.001 (-25.845)	-0.001 (-83.171)	-0.001 (-9.047)	-0.001 (-55.233)	-0.001 (-12.371)	-0.001 (-45.726)
FEMALE	-0.283 (-13.539)	-0.405 (-63.910)	-0.273 (-10.677)	-0.391 (-69.325)	-0.413 (-7.566)	-0.466 (-59.016)	-0.233 (-4.801)	-0.400 (-42.924)
MARRIED	0.327 (13.038)	0.068 (9.778)	0.370 (12.144)	0.144 (22.136)	0.179 (2.747)	0.089 (9.827)	0.299 (4.999)	0.115 (11.066)
DIPL	0.226 (8.798)	0.321 (41.966)	0.201 (6.427)	0.276 (40.554)	0.324 (4.739)	0.293 (31.726)	0.244 (4.063)	0.225 (20.984)
BACH	0.145 (4.201)	0.516 (40.113)	0.152 (3.539)	0.460 (44.969)	0.317 (3.408)	0.454 (29.784)	0.057 (0.769)	0.372 (20.664)
BACHPL	0.285 (6.160)	0.628 (34.279)	0.237 (-4.242)	0.533 (37.455)	0.474 (3.763)	0.483 (19.213)	0.336 (3.085)	0.495 (19.068)
PHD	0.539 (4.961)	0.725 (12.265)	0.621 (-4.485)	0.486 (10.116)	0.559 (2.409)	0.626 (8.696)	0.174 (0.651)	0.485 (6.031)
HLNE	0.221 (10.060)	0.206 (6.555)	0.216 (8.139)	0.288 (12.542)	0.092 (1.606)	0.603 (24.576)	0.325 (6.042)	0.308 (6.956)
HLNF	0.101 (0.640)	0.179 (6.039)	0.275 (1.429)	0.223 (8.275)	-0.534 (-1.361)	0.528 (11.863)	0.027 (0.071)	0.289 (3.506)
HLNEF	-0.094 (-0.252)	0.199 (4.441)	0.433 (0.954)	0.253 (4.994)	-1.904 (-2.670)	0.411 (4.333)	1.123 (0.835)	0.357 (2.768)
PROF	0.655 (21.810)	0.742 (78.329)	0.615 (16.871)	0.657 (82.267)	0.806 (9.756)	0.641 (55.027)	0.681 (9.870)	0.629 (47.299)
SKL	0.563 (18.531)	0.600 (65.227)	0.572 (15.303)	0.505 (61.426)	0.555 (7.267)	0.446 (42.441)	0.539 (7.604)	0.499 (38.006)

Table 6. Estimation of LOGIT model with Ontario, Prairies, and British Columbia as ROC for 1984-1991 immigrants to Canada (FB) and Canadian born (CB)

	Ontario		Prairies		British Columbia	
	FB	CB	FB	CB	FB	CB
	Estimated LOGIT coefficients (Wald-statistics)					
AGEP	.034 (10.736)	.022 (35.127)	.101 (1.127)	.034 (6.442)	-.049 (1.932)	-.028 (2.731)
FEMALE	-1.059 (4.716)	-.062 (.557)	12.156 (1.919)	-.545 (.972)	-1.278 (1.814)	.179 (1.151)
MARRIED	.010 (.001)	.201 (1.770)	5.452 (.993)	.182 (.302)	-.912 (4.326)	2.542 (13.658)
DIPL	-.025 (.010)	-.380 (11.255)	-6.609 (1.929)	-.554 (2.768)	.926 (1.351)	-4.571 (12.598)
BACH	.315 (.530)	-.984 (53.844)	-10.478 (1.798)	-1.379 (5.864)	-.947 (3.528)	-7.318 (14.473)
BACHPL	.139 (.092)	-1.206 (41.023)	-13.546 (2.052)	-1.963 (2.506)	1.777 (1.082)	-6.675 (14.003)
PHD	-1.160 (4.165)	-1.264 (5.231)	11.493 (.015)	-2.595 (5.597)	-9.332 (3.275)	-11.986 (13.509)
HLNE	-.111 (.144)	-2.278 (28.429)	1.329 (.272)	-3.815 (.203)	2.681 (2.389)	2.377 (2.503)
HLNF	2.060 (15.269)	1.033 (5.947)	36.765 (1.113)	-.874 (.011)	-.609 (.148)	6.469 (15.957)
HLNEF	2.003 (1.942)	-.901 (3.047)	94.961 (.354)	1.231 (.011)	20.164 (1.569)	6.253 (7.457)
PROF	-2.058 (3.952)	-.233 (2.870)	4.534 (1.942)	-.675 (.636)	-3.161 (1.822)	-4.885 (10.513)
SKL	-.528 (2.487)	-.061 (.135)	3.274 (1.703)	-1.009 (.617)	-1.340 (1.899)	-3.897 (8.243)
IDPC	-5.903 (2.751)	-2.094 (2.802)	42.544 (1.678)	-6.721 (.643)	-16.424 (2.418)	-42.691 (10.043)
Constant	4.100 (13.550)	4.976 (138.673)	-11.472 (.656)	8.634 (1.103)	9.659 (6.937)	12.300 (31.270)

Table 7 Simulated probabilities of staying in Quebec

Year	<u>Canadian born</u>	<u>Foreign born</u>
1991	0.393	0.132
1995	0.996	0.951
1996	0.999	0.993

Table 8 Ontario: LOGIT model coefficients (Wald statistics):

Variables	1991 Stage 1		1995 Stage 2, period 1		1996 Stage 2, period 2	
	CB	FB	CB	FB	CB	FB
AGEP	-.001 (7.617)	-.002 (5.951)	.026 (126.352)	.019 (9.144)	.024 (22.841)	.004 (.140)
FEMALE	-.005 (.147)	-.001 (.002)	.008 (.015)	.430 (9.276)	.103 (.609)	-.230 (.635)
MARRIED	.037 (6.845)	.047 (2.577)	.154 (5.057)	.083 (.288)	.481 (10.381)	-.041 (.016)
DIPL	-.072 (20.544)	-.051 (2.389)	-.350 (21.795)	-.446 (7.254)	-.528 (10.940)	.200 (.299)
BACH	.131 (26.306)	-.131 (8.473)	-.561 (32.886)	-.542 (6.636)	-.699 (11.270)	.265 (.300)
BACHPL	.361 (96.140)	.003 (.002)	-.608 (20.766)	-.521 (3.794)	-.784 (7.578)	.046 (.007)
PHD	.091 (.572)	-.559 (16.344)	-1.683 (34.885)	-1.118 (5.039)	-1.810 (8.833)	-1.417 (4.223)
HLNE	.515 (108.543)	.370 (156.401)	-.958 (7.156)	.019 (.017)	-.495 (.715)	.221 (.517)
HLNF	-2.264 (1671.072)	-2.762 (451.569)	-2.270 (37.756)	-1.874 (19.538)	-1.460 (5.437)	-1.028 (.937)
HLNEF	-.099 (.838)	-1.409 (18.087)	-2.249 (23.042)	3.548 (.105)	3.401 (.173)	4.362 (.022)
PROF	.051 (7.125)	.115 (7.938)	-.183 (5.256)	-.115 (.406)	-.048 (.077)	-1.013 (7.674)
SKL	-.112 (33.728)	.032 (.582)	.030 (.108)	-.126 (.421)	.116 (.337)	-.515 (1.499)
INCDIFPC			-.065 (6.057)	-.116 (5.749)	-.147 (8.331)	-.067 (.380)
Constant	-.722 (197.218)	.299 (47.059)	3.803 (109.368)	3.379 (194.434)	4.803 (64.219)	5.683 (115.708)

Table 9 Simulated probabilities of staying in Ontario

Year	Canadian born	Foreign born
1991	0.263	0.567
1995	0.978	0.985
1996	0.996	0.996

Table 10 Simulated probabilities of staying

Age group	Foreign Born		Canadian Born	
	Married	Unmarried	Married	Unmarried
	Quebec			
20-35	0.951	0.968	0.988	0.992
36-65	0.936	0.974	0.997	0.997
	Ontario			
20-35	0.982	0.977	0.968	0.961
36-65	0.987	0.993	0.984	0.975

OR alternatively:

Table 11 Simulated probabilities of moving

Age group	Foreign Born		Canadian Born	
	Married	Unmarried	Married	Unmarried
	Quebec			
20-35	0.049	0.032	0.012	0.008
36-65	0.064	0.026	0.003	0.003
	Ontario			
20-35	0.018	0.023	0.032	0.039
36-65	0.013	0.007	0.016	0.025

Figure 1. Entry Gates to Quebec: 1980-2001

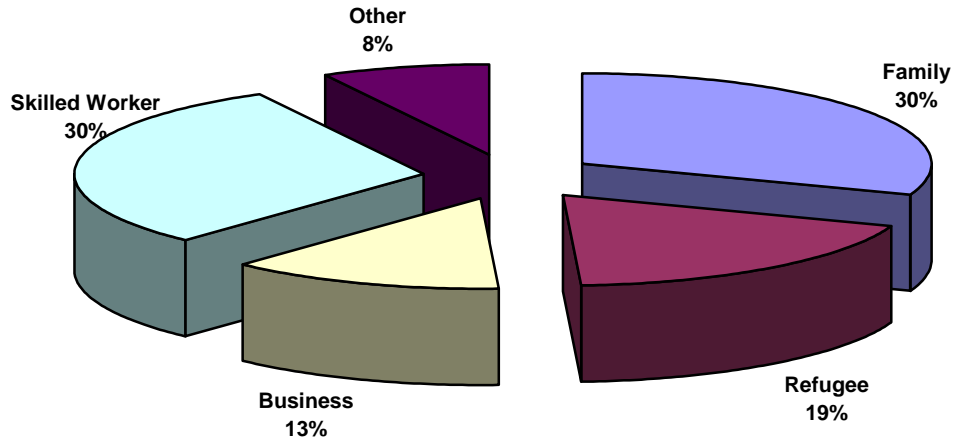
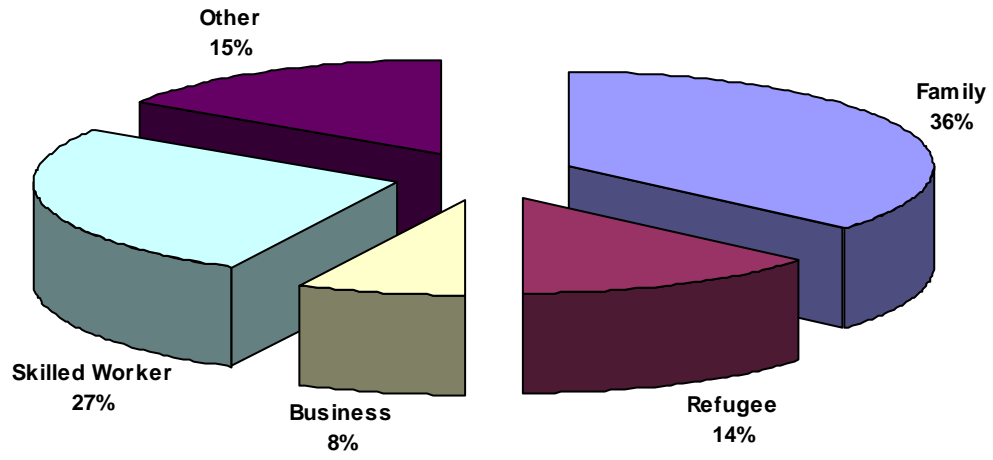


Figure 2. Entry Gates to ROC: 1980-2001

**Other category includes Retired, Assisted Relatives, Live-in Caregivers, Sponsored or Nominated (1952 Act)*

Figure 3 Immigration Triangle

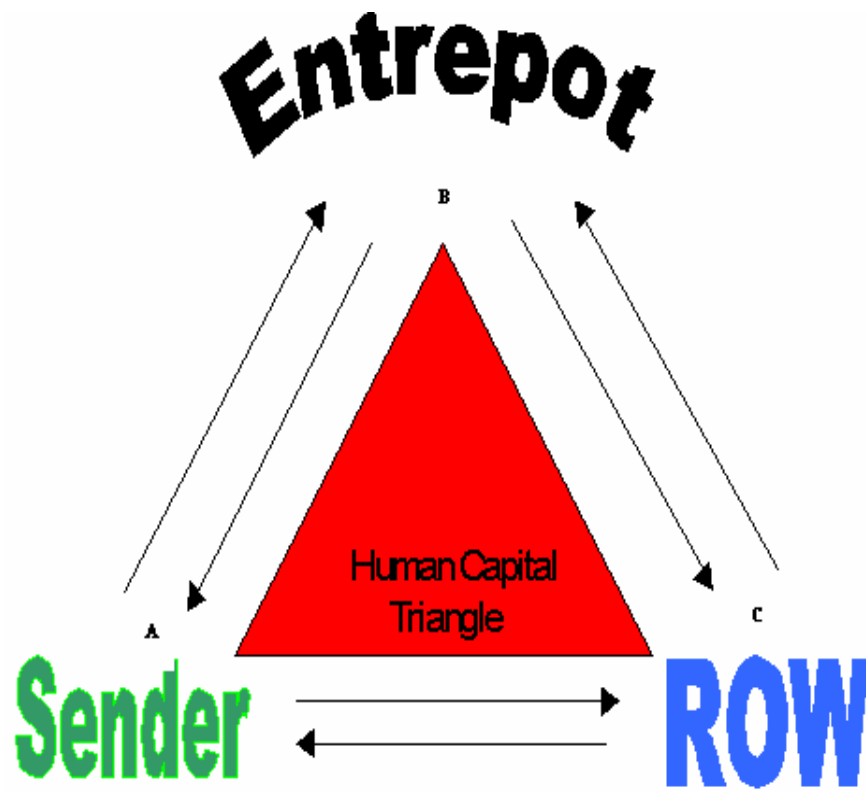


Figure 4: Decision Tree for Foreign-Born

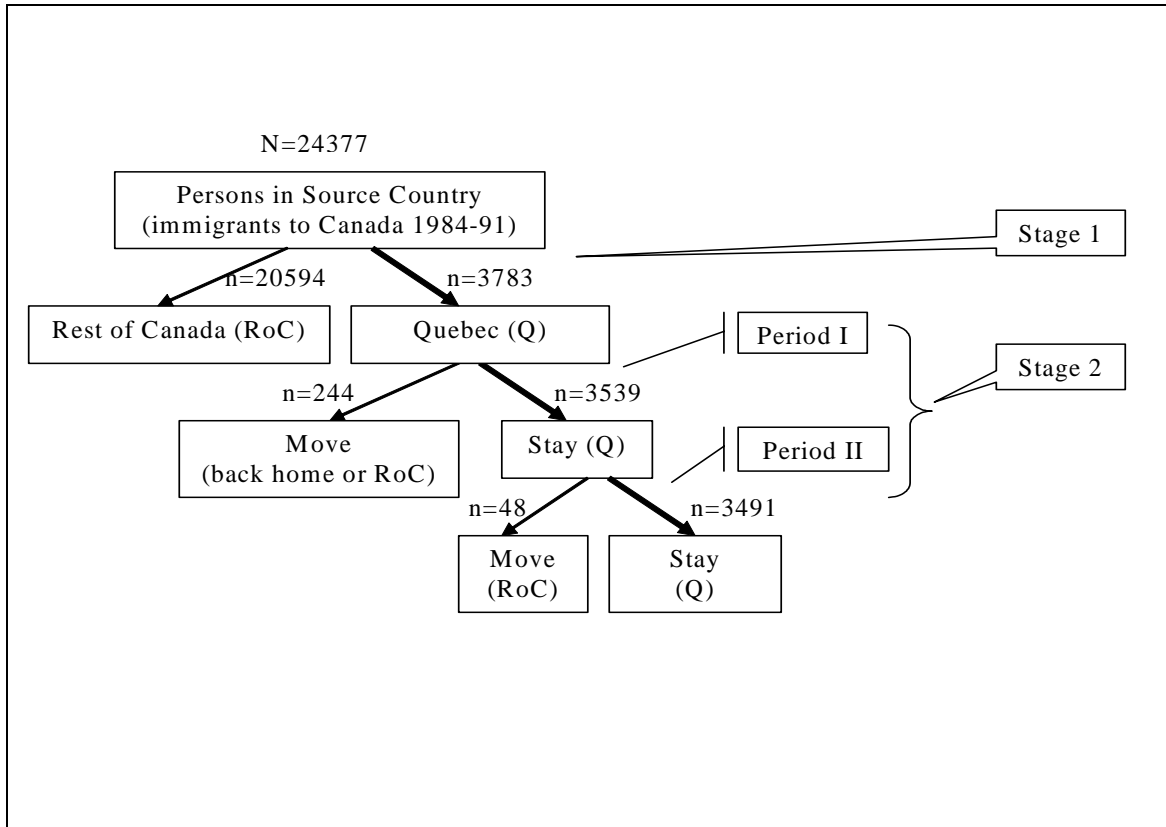


Figure 5: Decision Tree for Canadian-born

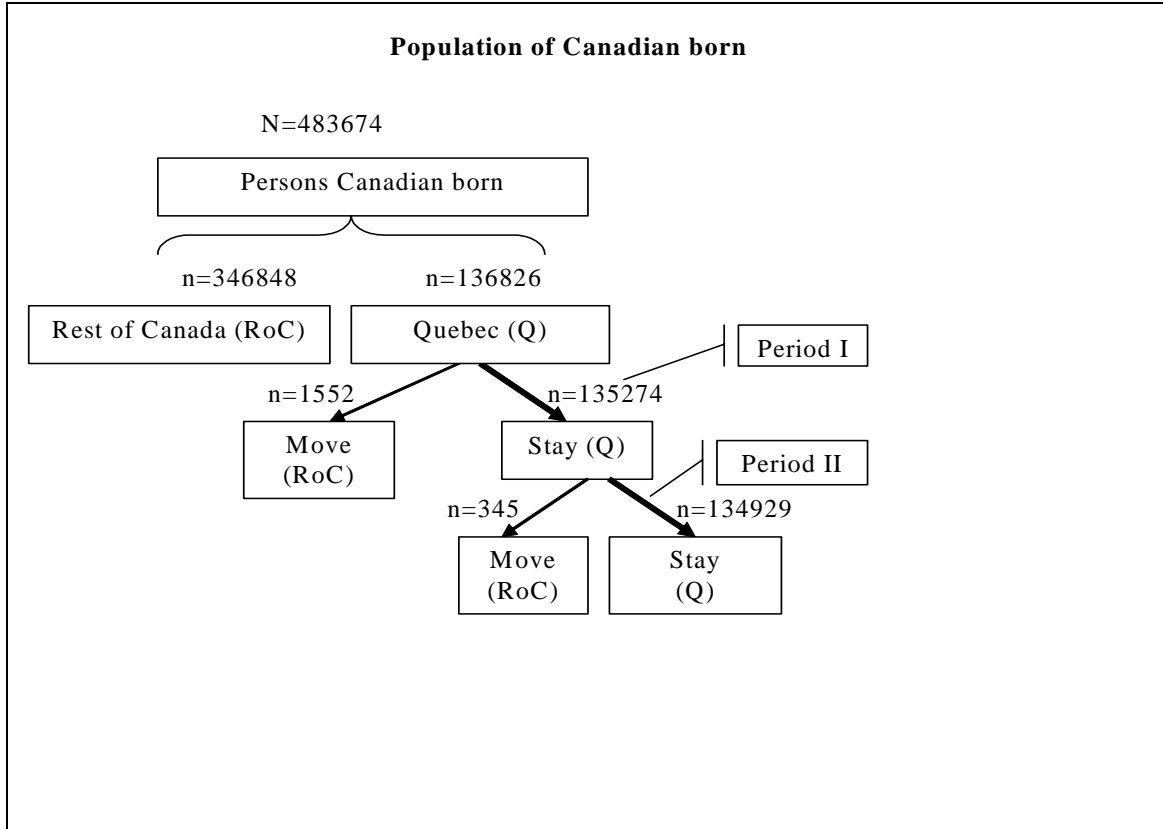


Figure 6. Age-Earnings Profiles of Canadian Born Movers (CBM), Canadian Born Stayers (CBS), Foreign Born Movers (FBM), and Foreign Born Stayers (FBS) in Quebec

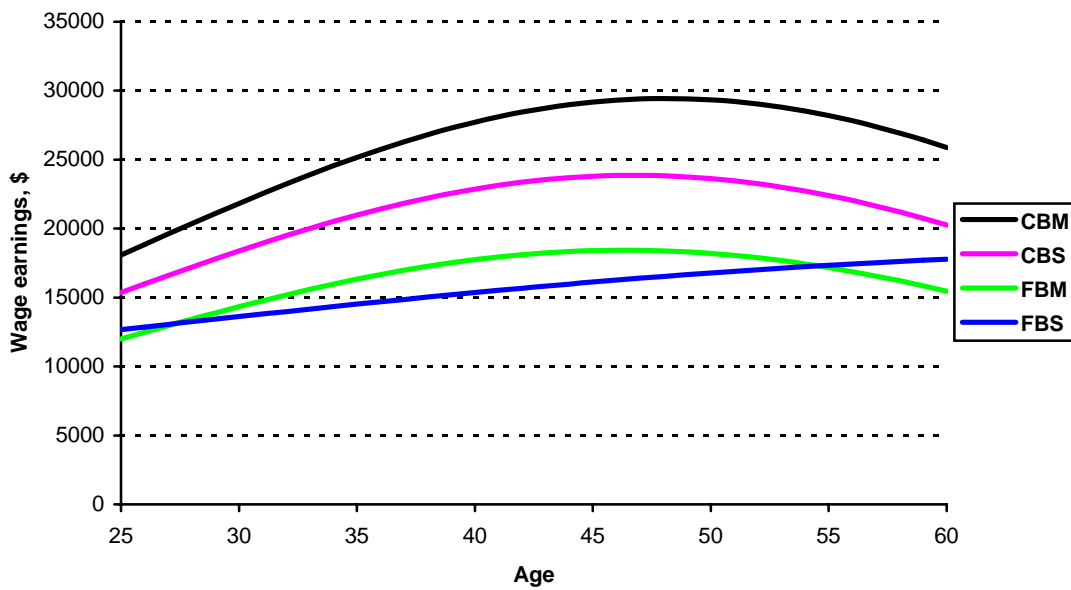
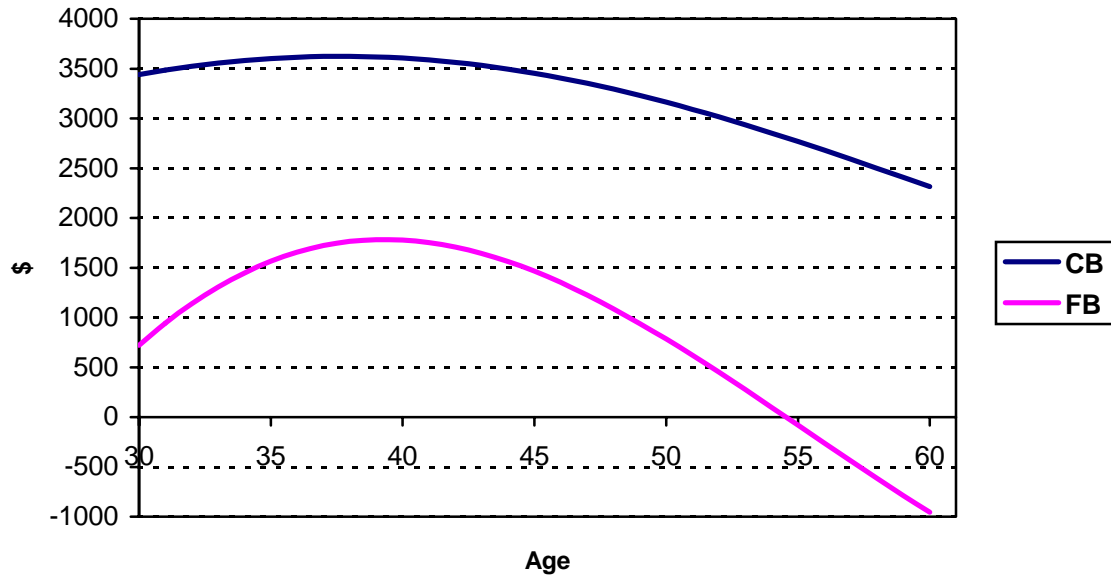


Figure 7: Present Value Differences Between Movers And Stayers For Canadian Born (CB) And Foreign Born (FB)



Appendix 1: Quebec Selection Grid for Worker/Assisted Relative: circa 2003

Factor	Subcriteria	Maximum Points
1. Training	1.1 Schooling	11
	1.2 Second specialty	4
	1.3 Preferred education	4
2. Employment	A. Assured offer of employment	15
	B. Profession in demand	12
	C. Employability *	8
3. Experience	Professional experience	10
4. Suitability	4.1 Personal qualities	6
	4.2 Motivation	2
	4.3 Knowledge of Quebec	2
	4.4 Stay in Quebec	6
	4.5 Relationship with Quebec	3
5. Age		10
6. Knowledge of Languages		
6.1 French	18	
	6.2 English	6
7. Spouse Characteristics	7.1 Training	5
	7.2 Professional experience	1
	7.3 Age	2
	7.4 French	8
8. Children		8
9. Financial		1
10. Passing score (without Factor 4) for unmarried applicants		50 points
11. Passing score (without Factor 4) for married applicants		58 points

Notes:

a. To receive consideration for selection without a personal interview, unmarried applicants must obtain a score of 60 (without Factor 4), and married applicants, 68 (without Factor 4).

b. Quebec uses an “Employability and Occupation Mobility” (EMP) grid on which unmarried applicants must get 30 points, and unmarried ones 35 points in order to receive 8 points under Factor 2. The EMP grid comprises the 6 following factors: Training, Experience, Age, Knowledge of Languages, Stay in Quebec and relationship with Quebec, and Spouses Characteristics.

Appendix II

Table II-A. Definitions of samples used in the model

Classification	Definition	SPSS Case Selection Code	New Variable	Sample size	
				Canadian born	Foreign born
ROC resident in 1991 (stage1)	Lived in Quebec in 1996 and was not a Quebec resident in 1991 OR did not live in Quebec in 1996 and was a non-mover/non-migrant since 1991 OR did not live in Quebec in 1996 and 1991	(prov=24 AND prov5p<>5) OR (prov<>24 AND prov5p=99) OR (prov<>24 AND prov5p<>5)	PQ5=0	346848	20594
Quebec resident in 1991 (stage1)	Did not live in Quebec in 1996 and was a Quebec resident in 1991 OR lived in Quebec in 1996 and was a non-mover/non-migrant since 1991 OR lived in Quebec in 1996 and was a Quebec resident in 1991	(prov<>24 AND prov5p=5) OR (prov=24 AND prov5p=99) OR (prov=24 AND prov5p=5)	PQ5=1	136826	3783
Mover (stage 2, period 1)	Quebec resident in 1991 AND {lived in Quebec in 1996 and was not a Quebec resident in 1995 OR did not live in Quebec in 1996 and was a non-mover/non-migrant since 1995 OR did not live in Quebec in 1996 and 1995}	PQ5=1 AND ((prov=24 AND prov1p<>5) OR (prov<>24 AND prov1p=99) OR (prov<>24 AND prov1p<>5))	PQ1=0	1552	244
Stayer (stage 2, period 1)	Quebec resident in 1991 AND {did not live in Quebec in 1996 and was a Quebec resident in 1995 OR lived in Quebec in 1996 and was a Quebec resident in 1995 OR lived in Quebec in 1996 and was a non mover/non-migrant since 1995}	PQ5=1 AND ((prov<>24 AND prov1p=5) OR (prov=24 AND prov1p=99) OR (prov=24 AND prov1p=5))	PQ1=1	135274	3539
Mover (stage 2, period 2)	Quebec resident in 1991 and 1995 AND ROC resident in 1996	PQ1=1 AND prov<>24	-	345	48
Stayer (stage 2, period 2)	Quebec resident in 1991 and 1995 AND Quebec resident in 1996	PQ1=1 AND procp=24	-	134929	3491