THE EFFECTS OF

MIGRATION SELECTIVITY

ON QUEBEC'S POPULATION

BY

KIM CALDWELL

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ABSTRACT

The issue of preserving Quebec's French culture has become paramount to those who fear its future existence. Maintaining a large proportion of the Canadian population is necessary in order for cultural preservation. However, Quebec is losing its share of the national population, despite the introduction of various policies to increase that proportion.

The purpose of this research is to study the effects of migration selectivity, that is, the differences in migration behaviour with respect to personal attributes, on Quebec's population. The personal attributes considered are birth place, education level, marital status, mother tongue and gender. For each personal attribute, the net migration rate is determined for 10 different age groups. The net flow of people across the Quebec border will then be revealed. The characterization of the people who are migrating in and out of Quebec will be established and finally the ultimate effect the migration process has on the Quebec population will be discussed.

ACKNOWLEDGEMENTS

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1.   INTRODUCTION

The province of Quebec has always been a unique part of Canada -- its french culture and people symbolizing Old France in so many ways. This awareness has led to a strong desire by the Quebec Francophones to preserve and protect their way of life almost to the point of becoming an independent nation. This conviction has caused great debates and conflict between Quebec and other provinces and the federal government in the late 60s and early 70s. The issue became very important to the political figures of Quebec. The need for strong political support from the public was necessary in order to achieve the goals of sovereignty. The more people there were in support of sovereignty the more strength the group had politically. However, the province of Quebec may have had a large proportion of the people's support but it was not enough to obtain the political goals set by the political party, the Parti Quebecois.

Proportional to Canada, Quebec's population was too small. The province of Quebec needed to expand its population in order to increase the french speaking population. Presently, next to Ontario, Quebec has the second highest share of the nation's population, which is about 25.8% of Canada's population (Canada Year Book, 1988). However, despite this large proportion, Quebec is losing its share of

the population. The province has attempted to increase the population through monetary awards given to couples that give birth to a child. For a couple that had their first child, the provincial government paid $500 and for a second or higher order child the government paid $3000. This tactic failed to produce the results that were expected and instead the growth rate remained low.

Obviously, the main reason for Quebec's low growth rate is a net out flow of people to the rest of Canada. The composition of the relative loss of population for Quebec has not been well investigated. Therefore, there is a need to better understand the composition of the migration flows and the possible effects the migration patterns will have on the Quebec population. This information could prove to be beneficial to the future policy makers of Quebec. Policies could be more effective and more appropriate goals could be set once the status of the province is understood.

Certain migration trends could result in important economic and social consequences. For instance, if a population experiences a large loss of highly educated people, the quality of human capital will decline and the previous investment in education will be lost. Prevention of this trend would only prove to be beneficial to the local economy. With a lack of better educated people the local economy would not be attractive to investors. If Quebec

experiences a greater net loss of non-Francophones, the French/English polarization in Canada will be aggravated and Quebec's language policy may have to be re-examined.

The outline of this paper consists of a review of migration literature in Section 2. Section 3 contains a description of the procedures and data used. Section 4 contains observations and analysis of the migration patterns. The paper ends with a summary and concluding remarks in the Section 5 and 6, respectively. For more detailed tables of the data used, see Appendix A.

2. LITERATURE REVIEW

Past research has shown that migration is a selective process where the choice to migrate is strongly dependent on the personal factors of the people involved (Lee, 1966). Many studies have characterized migration selectivity with respect to personal attributes but there is little documentation on the effects of migration selectivity on a population. By taking previous results a step further, this research paper will attempt to determine the effects. In the succeeding pages, a brief review of the works of other researchers in this area will be presented. Canada and other nations have made important contributions to this research but only the studies done on interprovincial migration in

Canada will be reviewed since they provide significant comparisons to the area of research presented in this paper.

Many researchers have found similar comparative migration patterns occurring with respect to migration causes and behaviour. Generally, results have shown that people with higher mobility rates have higher levels of education, fewer children and, in Canada, are either unilingual in English or bilingual in French and English (Liaw, 1988b:Robinson and Tomes, 1982).

Liaw (1988b) considered the migration patterns of the Canadian population with respect to various personal attributes for the time period of 1976-1981. This study found a clear distinction in migration selectivity with respect to education such that those with the highest education were the most migratory whereas those with the lowest education were the least migratory (Liaw, 1988b). These results are common in most studies and can be applied to the interprovincial migration patterns of Canada except Quebec. Robinson and Tomes (1982) discover this exception to the effects of education on migration rates. They state that consistent with findings for other provinces, more education increases the mobility of Quebec anglophones whereas, more education reduces the mobility of Quebec francophones (Robinson & Tomes, 1982).

Family type also had a distinct effect on the patterns

of migrations. Families without dependents are likely to have more freedom to migrate than families with dependents (Liaw, 1988b). Liaw (1988b) shows that the selectivity by family type is the clearest among all the personal factors considered. Shaw (1985) states that if there is a larger representation of children or older people among the in-migrants, the demand for specific services such as schooling or hospitals will be affected. If these patterns are found to exist in this study, the effect they will have on social programs and economic conditions of Quebec will be further discussed.

With the focus of this paper on the province of Quebec, one area that will be emphasized is the effect mother tongue has on migration. Several studies have found a strong correlation between the nature of mother tongue and the rate of migration. Robinson and Tomes (1982) found in their study a significant difference in interprovincial migration rates when mother tongue is considered. Their results showed that when monetary returns to migration were held constant, the bilingual francophones and monolingual anglophones were more likely to migrate out of Quebec than the monolingual francophones and the bilingual anglophones (Robinson & Tomes, 1982). One of the reasons they suggested for this pattern was the increased availability of job information where the knowledge of a second language is beneficial (Robinson &

Tomes, 1982). Explanation of the significant migration patterns found will not be a part of this research. It will only be provided as a supplement.

Liaw and Ledent (1988) also found similar migration patterns for the elderly. The nested logit model was used to produce the results that, in Quebec, the French were the least willing to out-migrate (4 per thousand) whereas the Minority and especially the English groups were much more willing to out-migrate (40 and 87 per thousand respectively) (Liaw & Ledent, 1988). Similar migration patterns between contrasting age groups is a common result found in migration studies. Despite the age gap between the elderly and young adults, Liaw (1988a) finds the variations in out migration rates from Quebec with respect to mother tongue for young adults similar to, but somewhat weaker than, that of the elderly. It is interesting to note that previous studies have shown that French speaking young adults (Liaw 1988a) and French speaking elderly (Liaw & Ledent, 1988), that do not reside in Quebec, have a relatively high propensity to migrate interprovincially and strongly prefer Quebec as a destination (Liaw, 1988b). This unique migration pattern of the francophones should surface in this research paper, and will be taken a step further in an attempt to determine the effect it has on their population.

Within this study, the effects of these distinct

migration patterns on Quebec's share of the national population and its population composition will be studied closely, although it is not the purpose of this paper to determine causal factors. It is expected that the findings of this research will complement those of past researchers.

3. PROCEDURES AND DATA USED

This study divides Canada into two regions: Quebec and the rest of Canada. Eliminated from the rest of Canada is the province of P.E.I., the North West Territories and the Yukon due to their small contributions. The statistics come from a Public Use Sample (PUS) of the 1981 Census by Statistics Canada. The Pus contains more than 400,000 records of individuals for the 5-year time period from 1976 to 1981. The sample represents 1.7% of the Canadian population and is carefully selected to reflect the attributes of the Canadian population well. Each individual record contains 102 variables, all capable of being part of this study. Due to time constraints for this study only five variables are chosen. Those are birth place, education, marital status, mother tongue and gender.

The PUS is initially manipulated by a SAS computer programme into 5 and 10 year age groups except for the open ended age group for the elderly of 65 years and beyond. With

the aid of another programme the individuals are then classified as migrants between 1976 and 1981 or stayers. The variable PR5 represents the person's place of residence in 1976. If this place of residence is not within Canada then this person is eliminated from the study. In other words, all recent immigrants are detached from this research. This variable is classified as having either Quebec status or belonging to the rest of Canada. The individuals are grouped accordingly. Each person's place of residence in 1981 is represented by the variable PROV. The same steps involved above are used in order to determine the migration status of each individual according to PROV.

In another programme, each individual is grouped into various levels within each personal variable. Education takes on 4 different levels: (1) university degree, (2) diploma/certificate, (3) without a degree, diploma or certificate and (4) student. Birth place is divided into 3 different levels: (1) native, (2) foreigners and (3) non-native. Marital status consists of 4 different levels: (1) married, (2) wedded between 1976 and 1981, (3) single and (4) divorced/widowed/separated. Mother tongue takes on 3 different levels: (1) French, (2) English and (3) Minority group. Finally gender is divided into 2 different levels: (1) female and (2) male.

Following the procedures described above, a SAS

procedure is used to calculate the frequencies for each specific level within each personal variable. These frequencies are then used to calculate the out-migration rate, the in-migration rate and the net migration rate. The following three equations are used to calculate the rates:

out-migration rate = $\dfrac{\text{\# of people leaving Quebec}}{\text{population of Quebec in 1976}}$ (1)

in-migration rate = $\dfrac{\text{\# of people entering Quebec}}{\text{population of Quebec in 1976}}$ (2)

net migration = in-migration rate - out-migration rate (3)
   rate

These rates reveal the flows of people across the Quebec borders.

The out-migration rates are tested for significance by using the Proportions Test. This test determines an interval with a 95% confidence level. The standard error (of a proportion) is calculated for each out-migration rate and used in an equation with the specific proportion to determine the lower boundary of the confidence interval. Each out-migration rate is then tested for significance and if any rate produces a negative result, it is insignificant and is eliminated from further analysis. Anything else is considered as being statistically significant. Also any migration rates that produce a zero are removed from the study.

4.0   OBSERVATIONS AND ANALYSIS

4.1   OVERALL MIGRATION PATTERN

During the period from 1976 to 1981, it was a time of great political conflict between the Quebec Separatists, who wanted to become an independent nation, and those fighting for national unity. It was also a time when Quebec continued to experience net loss in migration. Table 1 shows the age patterns of the migration rates of Quebec for the total population and by sex. The loss in population can be seen in Figure 1, where the overall migration losses experienced by Quebec are displayed graphically. The line representing the overall net migration remains entirely in the negative portion of the graph thereby symbolizing a loss in every age group. The net migration rate is broken down into two separate portions, in and out-migration rates. These two lines show more specifically whether the net loss is the result of high out-migration or low in migration. As Figure 1 shows, the in-migration rate is very small compared with the out-migration rate.

The loss in population is greatest for the young to middle age groups where the net migration rate is lower than -2% for the groups aged 5-44 years. At the age of 45 years the rate increases to -1.94% and continues to increase but at a decreasing rate. There is not much change beyond 45 years

TABLE 1: OVERALL MIGRATION TRENDS FOR QUEBEC, 1976-1981

	AGE	OUT-MIGRTN RATE (%)	IN-MIGRTN RATE (%)	NET MIGRTN RATE (%)
FEMALE	5-9	3.45	1.54	-1.91
	10-14	2.99	.72	-2.88
	15-19	2.87	.86	-2.01
	20-24	4.55	1.29	-3.26
	25-29	4.69	2.40	-2.29
	30-34	4.29	1.82	-2.47
	35-44	3.02	.88	-2.14
	45-54	2.39	.34	-2.05
	55-64	2.22	.39	-1.83
	65+	2.24	.44	-1.80
MALE	5-9	4.04	1.16	-2.88
	10-14	3.34	1.07	-2.27
	15-19	2.90	.52	-2.38
	20-24	4.68	.85	-3.83
	25-29	5.35	2.17	-3.18
	30-34	4.14	2.05	-2.09
	35-44	3.67	1.00	-2.67
	45-54	2.46	.63	-1.83
	55-64	1.85	.40	-1.46
	65+	1.87	.27	-1.61
BOTH SEXES	5-9	3.75	1.35	-2.40
	10-14	3.17	.90	-2.58
	15-19	2.89	.69	-2.20
	20-24	4.62	1.07	-3.55
	25-29	5.02	2.29	-2.74
	30-34	4.22	1.94	-2.28
	35-44	3.35	.94	-2.41
	45-54	2.43	.49	-1.94
	55-64	2.04	.40	-1.65
	65+	2.06	.36	-1.71

MIGRATION PATTERNS FOR QUEBEC
DURING THE PERIOD 1976-1981

FIGURE 1

12
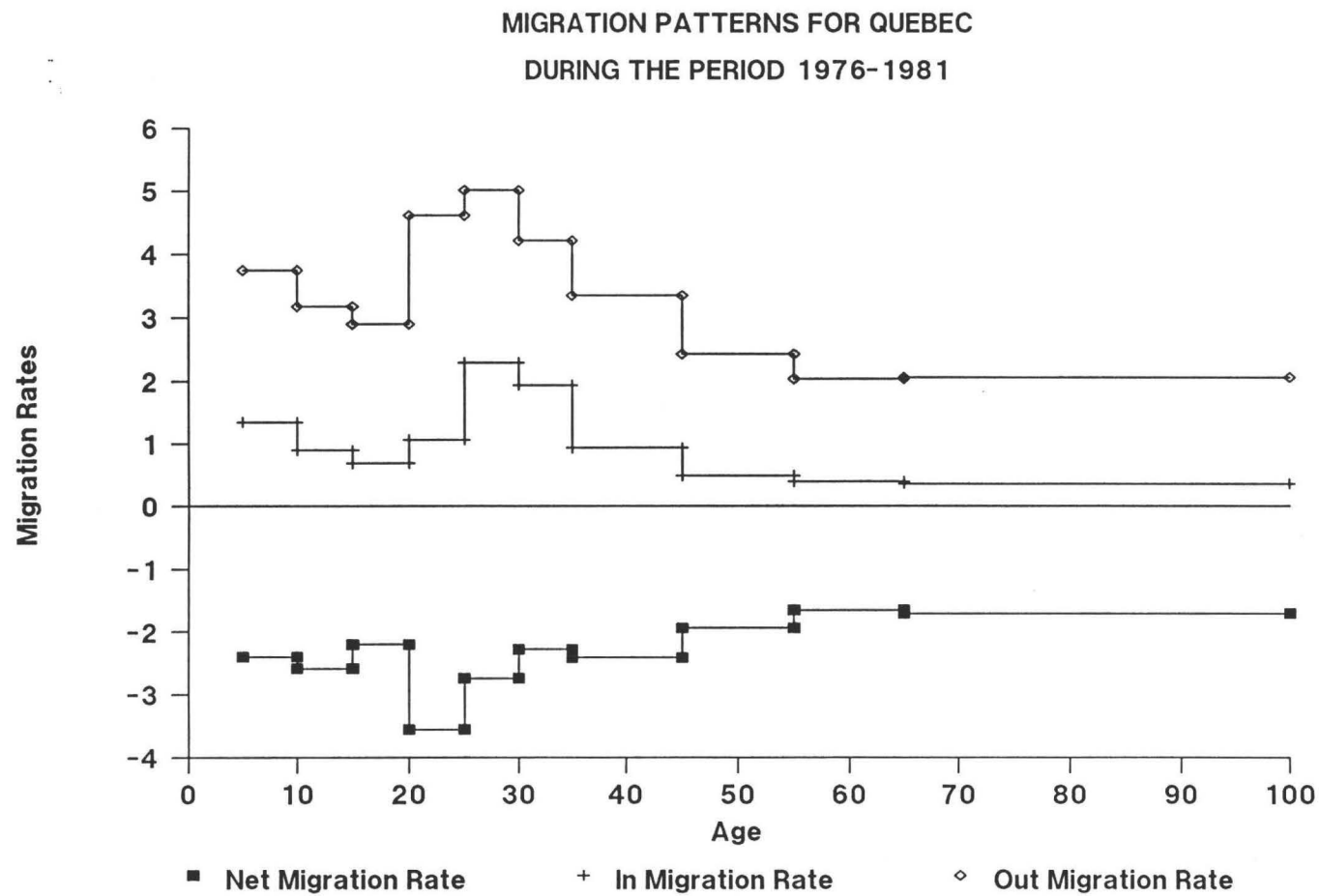
of age -- the change in the net migration rate slowly diminishes.

There is a sudden decline in the net migration rate from -2.2% in the 15-19 age group to -3.55% in the 20-24 age group. This is the result of a large increase in the out-migration rate and a small increase in the in-migration rate. For the 25-29 age group, the out-migration rate again increases but the impact on the net migration rate is not as great since the in-migration rate takes a large positive jump thereby producing a more balanced change in the net migration rate.

The net loss for the 20-29 age group is the greatest relative to the other age groups. The result is not a surprise since this age group is considered to be the most mobile due to employment-based moves.

4.2   MOTHER TONGUE

A particularly important factor in migration studies for Quebec is the very selective migration patterns that form with respect to mother tongue. There is a complete division of migration patterns between the three different classes within the mother tongue category. The graph is clear proof that there are problems with language differences within Quebec and to a lesser extent, Canada.

NET MIGRATION RATES FOR QUEBEC 1976-81

MOTHER TONGUE VARIABLE

■ English   + French   ◇ Minority Groups

FIGURE 2

14
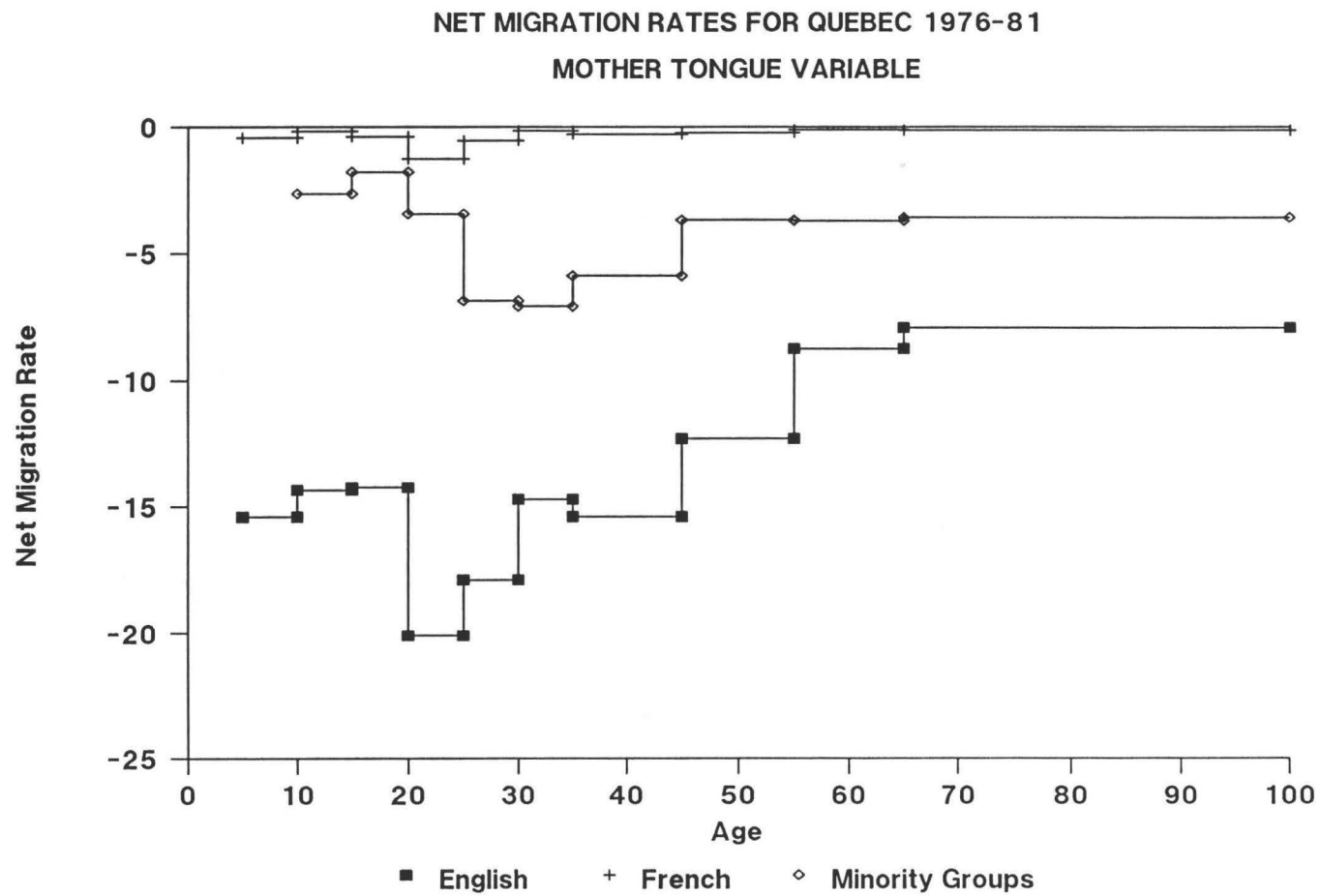
TABLE 2: MIGRATION RATES FOR QUEBEC, 1976-1981
MOTHER TONGUE VARIABLE

	AGE	OUT MIGRTN RATE (%)	IN-MIGRTN RATE (%)	NET MIGRTN RATE (%)
ENGLISH	5-9	21.47	6.08	-15.39
	10-14	17.32	3.00	-14.32
	15-19	16.58	2.36	-14.22
	20-24	24.3	4.19	-20.10
	25-29	27.5	9.61	-17.89
	30-34	20.71	6.01	-14.70
	35-44	18.52	3.12	-15.40
	45-54	13.87	1.57	-12.30
	55-64	9.79	1.05	-8.74
	65+	8.65	.74	-7.91
FRENCH	5-9	1.21	.76	-.44
	10-14	.74	.55	-.19
	15-19	.83	.44	-.39
	20-24	1.86	.59	-1.27
	25-29	1.82	1.28	-.55
	30-34	1.43	1.28	-.16
	35-44	.89	.58	-.30
	45-54	.58	.35	-.24
	55-64	.41	.29	-.13
	65+	.42	.28	-.14
MINORITY	5-9	-----	-----	-----
	10-14	3.39	.75	-2.64
	15-19	2.32	.54	-1.79
	20-24	5.41	1.98	-3.42
	25-29	10.17	3.33	-6.84
	30-34	10.01	2.95	-7.07
	35-44	7.39	1.53	-5.86
	45-54	3.99	.31	-3.68
	55-64	3.93	.22	-3.70
	65+	4.00	.43	-3.57

**NOTE: ----- represents values that are not significant

Clearly Figure 2 shows that the English-speaking people experienced the highest level of migration loss for every age group. The Minority group also experienced substantial migration loss in every age group, although the level of loss is less than half of that of the English group. Obviously, the French speaking people are the least likely to migrate thus remaining close to the province of Quebec. Although, it is surprising that even this group has a negative net migration rate. This only emphasizes the seriousness of Quebec's growth or lack of growth problem.

The large net outflow of the age group 20-24 years is again prominent in this graph as it was in Figure 1. The significant increase in the out-migration rate for this age group can be seen in all three language groups. Referring to Table 2, the increase in the out-migration rate is accompanied by a substantial increase in the in-migration rate as well, although the out-migration rate increases proportionally more than the in-migration rate.

4.3   BIRTH PLACE

Before proceeding with the analysis of Birth Place results, a few definitions should be clarified. Native is defined as those people with their province of birth being identical to their province of residence in June 1976 (Liaw

NET MIGRATION RATES FOR QUEBEC 1976-81
BIRTH PLACE VARIABLE

■ Native   + Foreign Born   ◇ Non-Native

FIGURE 3

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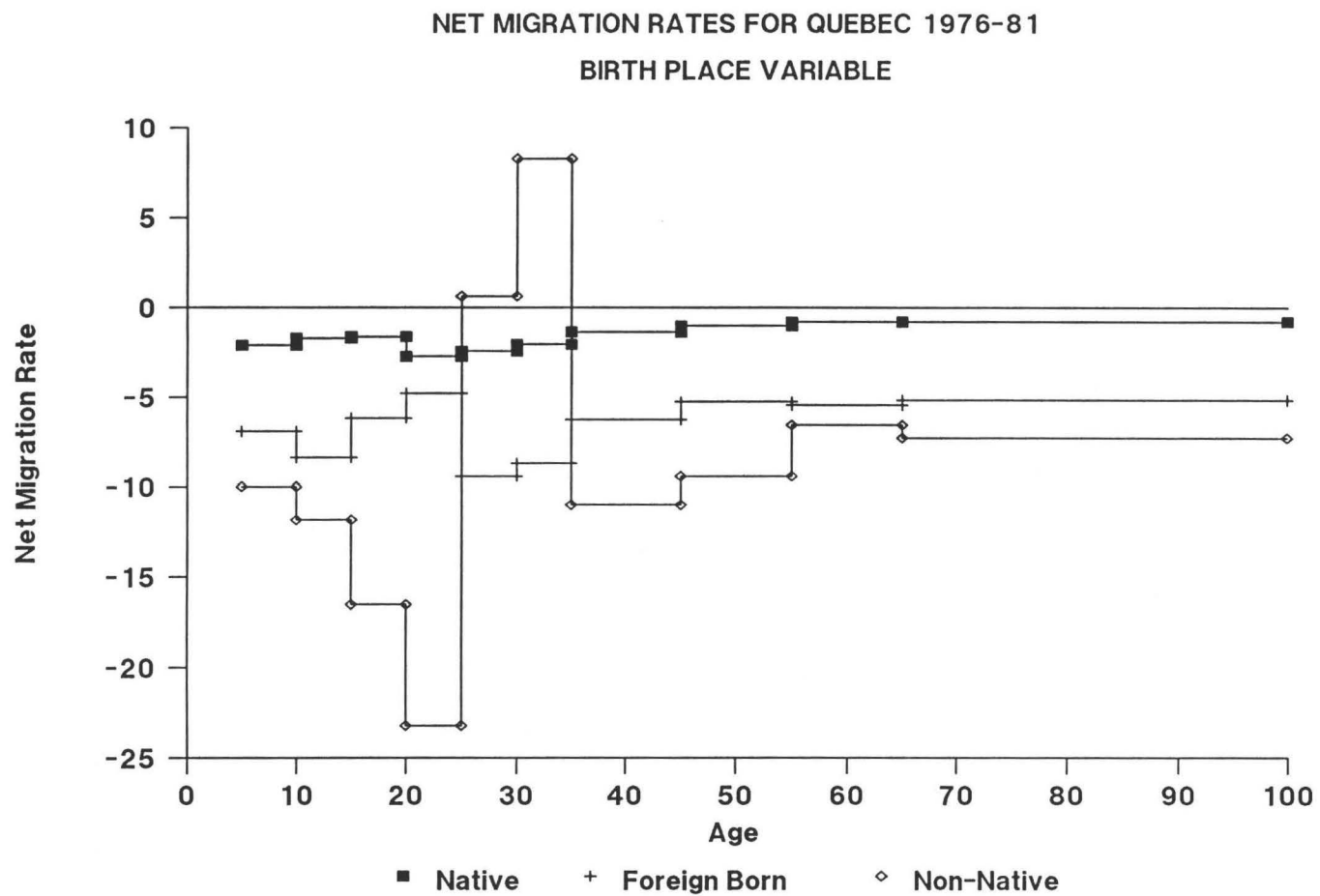
1988b). Foreign born is defined as those people with their place of birth being outside of Canada (Liaw, 1988b). Non-native is defined as those people with their province of birth being different from the province of residence in June 1976 (Liaw, 1988b).

Past research has shown that people who are non-native tend to be more migratory than people who are native (Liaw, 1988a). From Figure 3, it is virtually clear for all ages that the non-native people experienced a higher level of net loss than any other class, except for a sudden change from an extreme negative net migration rate to a positive net migration rate at the age of 25 years. The net migration rate remains positive throughout the ages 25-34 years and then plunges from 8.28% to -10.98% at age 35 years.

TABLE 3: Migration Rates for Quebec, 1976-1981
Birth Place Variable: Non-native

AGE	OUT MIGRTN RATE (%)	IN-MIGRTN RATE (%)	TRUE IN-MIGRTN RATE (%)	NET MIGRTN RATE (%)
5-9	29.15	19.19	3.08	-9.96
10-14	25.74	13.91	1.73	-11.83
15-14	29.06	12.54	1.23	-16.52
20-24	33.88	10.68	1.27	-23.20
25-29	28.82	29.46	2.70	.65
30-34	22.88	31.15	2.75	8.28
35-44	21.59	10.61	1.09	-10.98
45-54	15.88	6.47	.64	-9.41
55-64	10.70	4.16	----	-6.54
65+	12.10	4.84	----	-7.26

This inconsistency in the line is rather unusual since the rest of the line is negative. Referring to Table 3 and

the age group of 25-34, it is the result of a large increase in the in-migration rate for these two age groups. The out-migration rate remains fairly consistent throughout all of the age groups.

However, the in-migration rate is not necessarily a true measure of the propensity to migrate from the rest of Canada to Quebec and therefore can be misleading. It is probably better described as a measure of the impact on that particular age group in Quebec. So in other words, there is a positive impact on this age group of 25-34 years. From looking at Table 4 closely for the age group 25-34, the number of people that leave the rest of Canada and enter Quebec is definitely larger in comparison to the rest of the column. So obviously it is a unique and significant pattern.

TABLE 4:   Migration Status of the Sample Population
Birth Place Variable: Non-native

Age	# of pple stay Que	# of pple leave Que	# of pple enter Que	# of pple stay R.O. Can	Pop of Que /76
5-9	192	79	52	1635	271
10-14	251	87	47	2671	338
15-19	249	102	44	3528	351
20-24	322	165	52	4036	487
25-29	331	134	137	4934	465
30-34	354	105	143	5055	459
35-44	643	177	87	7900	820
45-54	572	108	44	6804	680
55-64	601	72	28	6114	673
65+	472	65	26	5362	537

The true measure of propensity to migrate into Quebec

is measured by the "true" in-migration rate:

$$TRUEINRATE = ROUT/(ROUT + RSTAY) \qquad (4)$$

where the denominator includes those people that are in the rest of Canada and are capable of migrating into Quebec (ROUT + RSTAY). The in-migration rate, referred to previously as more of a measure of impact rather than propensity, is not a true measure of propensity because the denominator consists of people who were already in Quebec in 1976 and hence could not migrate to Quebec in 1976-1981. This true measure of propensity is calculated for every personal variable but in most cases the value is proved insignificant by the significance test and is not worth discussing. See Appendix A for details of this measurement. With the exception of the birth place variable, the new values (TRUEINRTE) for non-natives are substantially different than the in-migration rate as defined in equation 2.

The high TRUEINRATE values of the 25-29 and 30-34 age groups suggest that the non-native people in these age groups are more likely to migrate into Quebec than those in the other age groups and thus helps produce the large positive deviation in the graph. A possible explanation for this change is the size of the pool of non-natives in the rest of Canada. Taking a closer look at Table 4, there is a substantial increase in the size of the pool of non-natives

in the rest of Canada for the 25-29 and 30-34 age group.

4.4 <u>EDUCATION</u>

The education variable produces a pattern exhibiting very selective migration behaviours (see Figure 4). The pattern is virtually clear cut in the sense that the people with the highest education have the largest net loss, excluding the students, for every age group except for the elderly where the college graduates share the same net loss. This loss is substantially larger than the other values.

There is not too much difference in net migration rates between people a diploma/certificate and people without a degree, diploma or certificate, although the people with a diploma or certificate have a slightly greater net loss than those people without a degree/diploma/certificate. Collectively, it can be seen from the graph, that more of the educated people, that is, college and university graduates, experience a greater net loss than people without a degree/diploma/certificate.

This difference in migration behaviours leaves an imbalance of educated people in Quebec thereby having an ill-effect on Quebec's economy.

NET MIGRATION RATES FOR QUEBEC 1976-81

EDUCATION VARIABLE
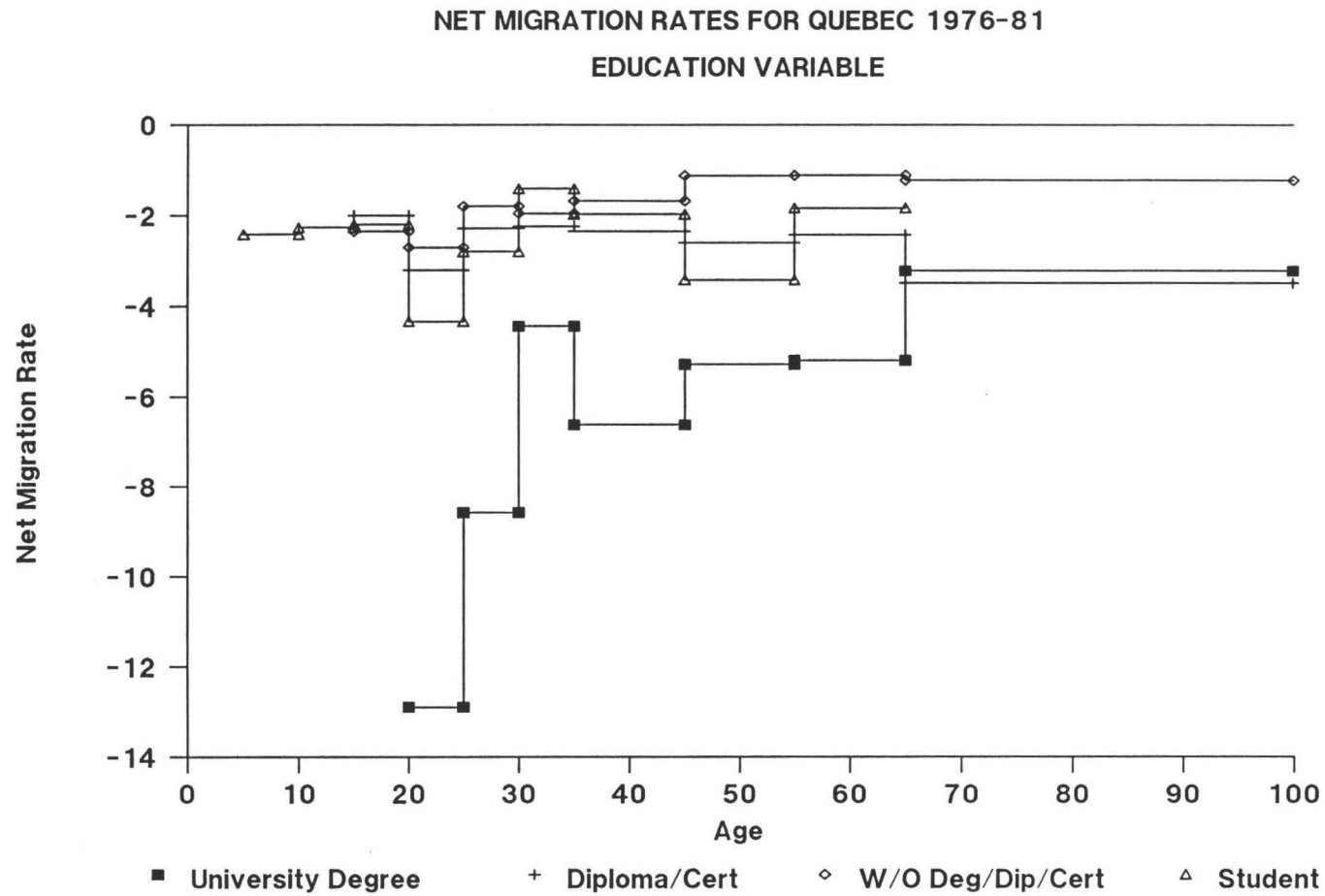
FIGURE 4

4.5   GENDER

The graph that shows the net migration rates by gender exhibits similar migration selectivity for males and females except for a few differences (see Figure 5).

For the 5-9 age group, the male children experience a greater net loss than the females by about one percentage point. Also for the ages 20-29 and 35-44, the males have a more negative net migration rate than the females. Only for the ages 30-34 and 45 and beyond do the females experience a greater net loss than the males. Females' greater mobility than males in the later years of life is consistent with results found in other research studies done in Canada (Liaw, 1988).

4.6   MARITAL STATUS

The marital status variable does not produce clear and concise results but instead great fluctuations across all age groups (see Figure 6).

From the ages 20-29, the net loss of single people is greater than the married class. This difference is a natural trend since most single people tend to be very mobile during this time of life. However, this trend changes during the ages of 30 and beyond where the net migration rate for single

NET MIGRATION RATES FOR QUEBEC 1976-81

GENDER VARIABLE
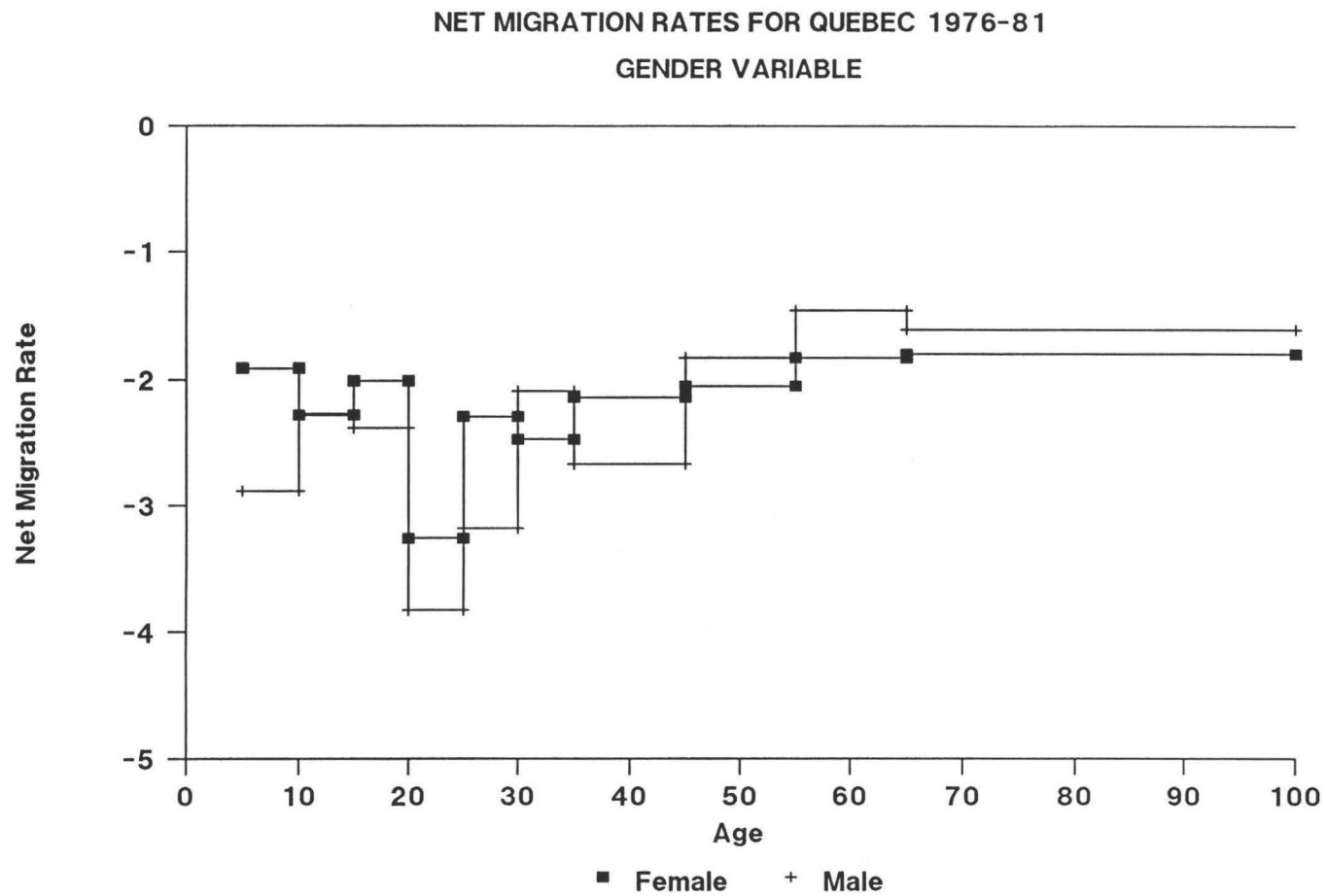
people takes a large positive jump, resulting in the smallest net loss among all other classes for the marital status variable.

It is surprising that the married class has a much higher net loss than the single class for the ages 30 and beyond. Most married couples at the ages of 30 and beyond have families which tends to prevent them from moving. It would be interesting to study a break down of this group into families with children and families without children. A study done by Liaw (1988) shows clear evidence that families with children have a lower propensity to relocate. For the married class and the single class, the net loss does decline as age increases.

The patterns for the wedded and divorced/widowed/separated classes are very irregular. It is difficult to see any kind of distinct trend for the wedded class since only four age groups register significant values. However, it appears that Quebec tends to lose a large proportion of this class.

The divorced/widowed/separated class tends to have a greater net loss out of all the other classes (with one exception: wedded class) for most age groups except for the age group 30-34 (where the married class has a slightly more negative value) and 55-64 (where divorced/widowed/separated class has the smallest net migration rate).

NET MIGRATION RATES FOR QUEBEC 1976-81

MARITAL STATUS VARIABLE

Net Migration Rate

Age

■ Married   + Wedded b/t 1976-81   ◇ Single   △ Dvcd/Wdwd/Seprtd
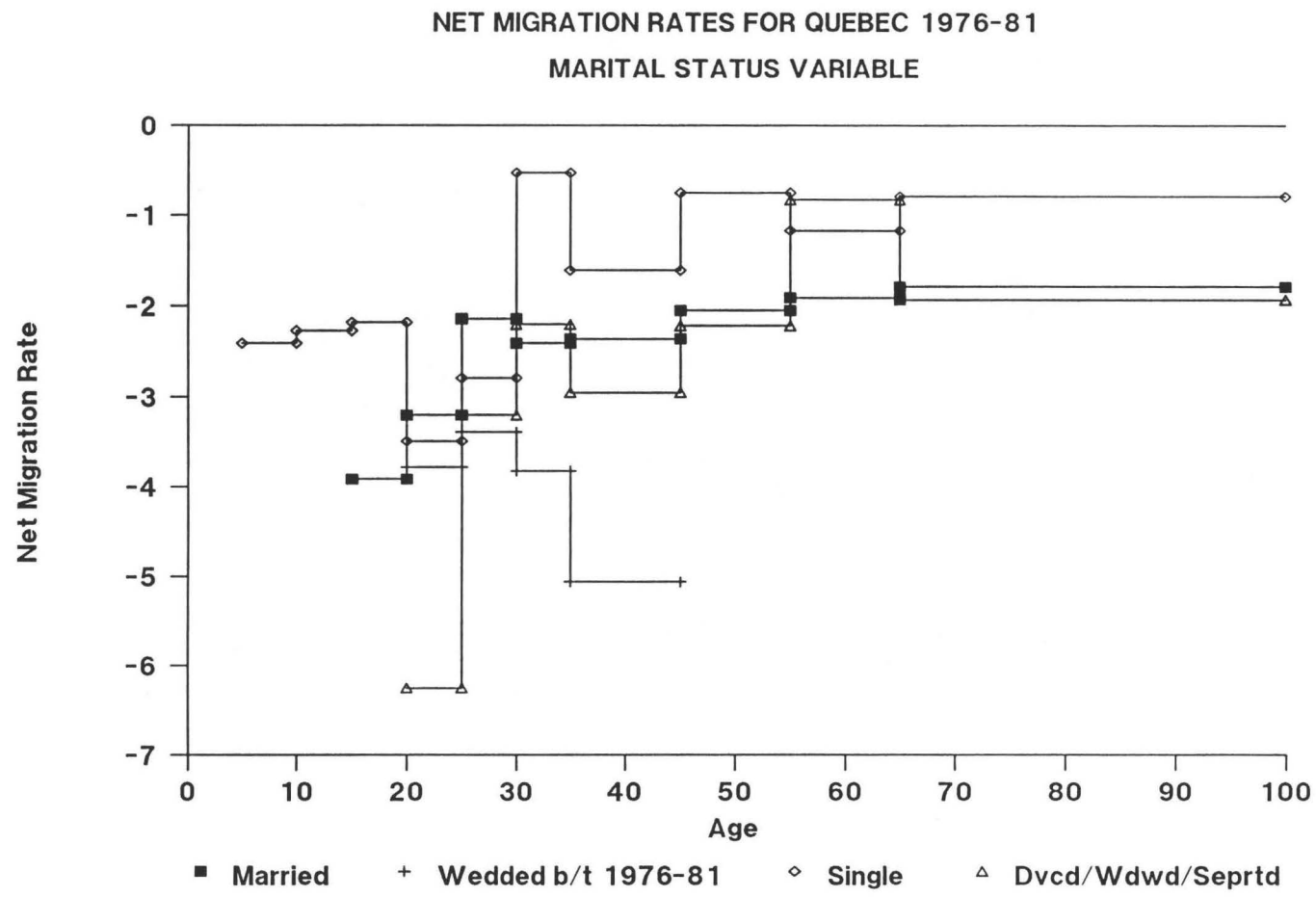
FIGURE 6

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The large net loss in the divorced/widowed class for the 20-24 age group is a bit extreme in comparison to the other rates for this class. One possible explanation is the small sample size for this age group. The small size distorts the calculations but the results are significant according to the proportions test. Despite the success of the significance test this value must be judged cautiously.

5. SUMMARY

First I will briefly summarize the migration patterns found:

1) The selectivity with respect to mother tongue reveals the most distinct pattern of migration patterns. The English experience the greatest net loss of people and the French experience the least net loss of people. The Minority group lies in between these two.

2) The selectivity with respect to birth place is quite large such that Quebec experiences the greatest net loss in the non-native group and the smallest net loss in the native group.

3) The selectivity with respect to education can be

divided into two groups: those with a higher level of education have a greater net loss in Quebec and those with a lower level of education have a lower net loss in Quebec.

4) The selectivity with respect to gender is quite small. Except for a few minor fluctuations between the two lines, they are very similar. The fluctuations come at a young age where the males have a higher propensity to migrate out of Quebec and at an elderly age where the females have a higher propensity to migrate out of Quebec.

5) The selectivity with respect to marital status is quite complicated. The most important trends are those between the single class and the married class. The single class has a higher propensity to migrate out of Quebec at the younger ages and at the age of 30 the married class has a higher propensity to migrate out of Quebec.

6. CONCLUSION

From this in-depth analysis of migration selectivity for the province of Quebec, it is quite obvious that Quebec is suffering from a tremendous loss of population.

It is not just the fact that the province is losing population but more importantly what political and economic implications does this loss hold for Quebec?

In order to answer this question, the most significant variables to consider are education and mother tongue. The large out flow of English-speaking Canadians during this time period is partly the result of a decade of political turmoil between the French and the English of Canada. The threat of Quebec's independence by the Separatist political group has only strengthened the barrier that already existed between the two groups. Instead of producing a more unified country, this analysis is proof that Canada is becoming a more polarized nation, unable to coexist.

The effect that the loss of the educated people has on Quebec is absorbed by the economy. A fruitful economy requires capital investment from big and small entrepreneurs. It requires an attractive business environment for investors to want to establish new markets. If an area has a healthy business district, the risk taken by new investors is small.

With a large proportion of the highest educated people leaving Quebec, there remains a large proportion of people with little or no education. The majority of this latter group will be part of the blue collar labour force. In other words, there will be a lack of professionals and

therefore a small labour pool. This deficiency is reflected in the number of investments made by large corporations in that area which will be small.

With very few large corporations and professionals in the region, there is additional strain on the local government. There is a smaller and not as wealthy tax base and a more socially dependent class of people. All of these factors combined create a large economic burden on the government. Also the fact that there are more people leaving than entering Quebec puts the government and local economy in a crisis situation.

The other variables used in the study are not as strongly connected to the economic and political implications of Quebec. Some of them reveal some very selective migration patterns that are consistent with past research work.

APPENDIX A: Populations and Migration Rates for Quebec, 1976-1981

BIRTH PLACE	AGES	# of pple stay in Quebec	# of pple leave Quebec	# of pple enter Quebec	# of pple stay in rest of Can	pop. of Quebec in 1976	out-migratn rate (%)	in-migratn rate (%)	true in-migrtn rate (%)	net migratn rate (%)
	5-9	8195	239	63	23226	8434	2.83	0.75	0.27	-2.09
	10-14	8827	186	34	22992	9013	2.06	0.38	0.15	-1.69
	15-19	11379	216	29	26218	11595	1.86	0.25	0.11	-1.61
	20-24	11761	399	69	25327	12160	3.28	0.57	0.27	-2.71
Level 1 Native	25-29	10140	360	106	20774	10500	3.43	1.01	0.51	-2.42
	30-34	9083	232	41	16935	9315	2.49	0.44	0.24	-2.05
	35-44	13650	217	28	22056	13867	1.56	0.2	0.13	-1.36
	45-54	11342	131	15	18429	11473	1.14	0.13	0.08	-1.01
	55-64	9169	84	12	16757	9253	0.91	0.13	0.07	-0.78
	65+	8502	74	8	15969	8576	0.86	0.09	0.05	-0.77
	5-9	145	15	4	740	160	9.38	2.5	-----	-6.88
	10-14	301	34	6	1984	335	10.15	1.79	-----	-8.36
	15-19	415	40	12	2804	455	8.79	2.64	-----	-6.15
Level 2 Foreign Born	20-24	440	42	19	2663	482	8.71	3.94	-----	-4.77
	25-29	640	93	24	3851	733	12.69	3.27	0.62	-9.41
	30-34	972	121	26	6031	1093	11.07	2.38	0.43	-8.69
	35-44	1780	162	41	10821	1942	8.34	2.11	0.38	-6.23
	45-54	1602	97	8	9693	1699	5.71	0.47	-----	-5.24
	55-64	1198	73	4	8054	1271	5.74	0.31	-----	-5.43
	65+	1413	82	5	11059	1495	5.48	0.33	-----	-5.15

	AGES	# of pple stay in Quebec	# of pple leave Quebec	# of pple enter Quebec	# of pple stay in rest of Can	pop. of Quebec in 1976	out-migratn rate (%)	in-migratn rate (%)	true in-migrtn rate (%)	net migratn rate (%)
	5-9	192	79	52	1635	271	29.15	19.19	3.08	-9.96
	10-14	251	87	47	2671	338	25.74	13.91	1.73	-11.83
	15-19	249	102	44	3528	351	29.06	12.54	1.23	-16.52
Level 3 Non-Native	20-24	322	165	52	4036	487	33.88	10.68	1.27	-23.2
	25-29	331	134	137	4934	465	28.82	29.46	2.7	0.65
	30-34	354	105	143	5055	459	22.88	31.15	2.75	8.28
	35-44	643	177	87	7900	820	21.59	10.61	1.09	-10.98
	45-54	572	108	44	6804	680	15.88	6.47	0.64	-9.41
	55-64	601	72	28	6114	673	10.7	4.16	-----	-6.54
	65+	472	65	26	5362	537	12.1	4.84	-----	-7.26

** Note: -----   represents values that are not significant according to the significance test.

EDUCATION	AGES	# of pple stay in Quebec	# of pple leave Quebec	# of pple enter Quebec	# of pple stay in rest of Can	pop. of Quebec in 1976	out-migratn rate (%)	in-migratn rate (%)	true in-migrtn rate (%)	net migratn rate (%)
	5-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10-14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-19	3	0	0	8	3	0	0	-----	-----
	20-24	219	37	4	806	256	14.45	1.56	-----	-12.89
Level 1 University Degree	25-29	803	129	49	2970	932	13.84	5.26	1.62	-8.58
	30-34	1001	102	53	3496	1103	9.25	4.81	1.49	-4.44
	35-44	1287	118	25	4047	1405	8.4	1.78	0.61	-6.62
	45-54	767	47	4	2137	814	5.77	0.49	-----	-5.28
	55-64	469	32	6	1561	501	6.39	1.2	-----	-5.19
	65+	327	15	4	1037	342	4.39	1.17	-----	-3.22

	5-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10-14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-19	1457	42	12	2682	1499	2.8	0.8	0.45	-2
	20-24	5472	246	63	12084	5718	4.3	1.1	0.52	-3.2
Level 2 Diploma/Certificate	25-29	5620	249	115	13115	5869	4.24	1.96	0.87	-2.28
	30-34	5255	197	75	12118	5452	3.61	1.38	0.62	-2.24
	35-44	6849	234	68	15725	7083	3.3	0.96	0.43	-2.34
	45-54	4310	143	27	11640	4453	3.21	0.61	0.23	-2.6
	55-64	2848	86	15	9030	2934	2.93	0.51	0.17	-2.42
	65+	1893	83	14	6715	1976	4.2	0.71	0.21	-3.49
	5-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10-14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-19	2269	73	18	7543	2342	3.12	0.77	0.24	-2.35
	20-24	3533	133	34	10497	3666	3.63	0.93	0.32	-2.7
Level 3 W/O Degree or Dip./Cert.	25-29	3011	102	46	9079	3113	3.28	1.48	0.5	-1.8
	30-34	2936	95	36	9135	3031	3.13	1.19	0.39	-1.95
	35-44	6467	150	39	17490	6617	2.27	0.59	0.22	-1.68
	45-54	7855	116	27	19479	7971	1.46	0.34	0.14	-1.12
	55-64	7439	105	21	19667	7544	1.39	0.28	0.11	-1.11
	65+	8053	121	21	24362	8174	1.48	0.26	0.09	-1.22
	5-9	8532	333	119	25601	8865	3.76	1.34	0.46	-2.41
	10-14	9379	307	87	27647	9686	3.17	0.9	0.31	-2.27
	15-19	8314	243	55	22317	8557	2.84	0.64	0.25	-2.2
	20-24	3299	190	39	8639	3489	5.45	1.12	0.45	-4.33
Level 4 Student	25-29	1677	107	57	4395	1784	6	3.2	1.28	-2.8
	30-34	1217	64	46	3272	1281	5	3.59	1.39	-1.41
	35-44	1470	54	24	3515	1524	3.54	1.57	0.68	-1.97
	45-54	584	30	9	1670	614	4.89	1.47	-----	-3.42
	55-64	212	6	2	667	218	2.75	0.92	-----	-1.83
	65+	114	2	0	276	116	0	0	-----	-----

** Note: ----- represents values that are not significant according to the significance test.

N/A   represents age groups that are not applicable to the corresponding variable.

MARITAL STATUS	AGES	# of pple stay in Quebec	# of pple leave Quebec	# of pple enter Quebec	# of pple stay in rest of Can	pop. of Quebec in 1976	out-migratn rate (%)	in-migratn rate (%)	true in-migrtn rate (%)	net migratn rate (%)
	5-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10-14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-19	264	17	6	642	281	6.05	2.14	-----	-3.91
	20-24	1767	79	20	3272	1846	4.28	1.08	0.61	-3.2
Level 1 Married	25-29	4298	191	95	11754	4489	4.25	2.12	0.8	-2.14
	30-34	7204	301	120	19598	7505	4.01	1.6	0.61	-2.41
	35-44	12683	415	106	33311	13098	3.17	0.81	0.32	-2.36
	45-54	10657	275	51	28859	10932	2.52	0.47	0.18	-2.05
	55-64	7929	184	29	24099	8113	2.27	0.36	0.12	-1.91
	65+	5635	121	18	18391	5756	2.1	0.31	0.1	-1.79
	5-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10-14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-19	118	6	6	701	124	0.85	-0.77	-----	-----
	20-24	2785	151	40	8595	2936	5.14	1.36	0.46	-3.78
Level 2 Wedded between 1976 & 1981	25-29	3281	195	77	8475	3476	5.61	2.22	0.9	-3.39
	30-34	1061	65	22	2794	1126	5.77	1.95	0.78	-3.82
	35-44	370	25	5	988	395	6.33	1.27	-----	-5.06
	45-54	90	1	1	232	91	0.43	-0.91	-----	-----
	55-64	35	1	0	105	36	0	0	-----	-----
	65+	20	0	0	53	20	0	0	-----	-----

	5-9	8532	333	119	25601	8865	3.76	1.34	0.46	-2.41
	10-14	9379	307	87	27647	9686	3.17	0.9	0.31	-2.27
	15-19	11650	333	72	31157	11983	2.78	0.6	0.23	-2.18
	20-24	7823	364	78	19375	8187	4.45	0.95	0.4	-3.49
Level 3 Single	25-29	3089	175	84	7470	3264	5.36	2.57	1.11	-2.79
	30-34	1454	54	46	3313	1508	3.58	3.05	1.37	-0.53
	35-44	1567	44	18	2721	1611	2.73	1.12	0.66	-1.61
	45-54	1194	14	5	2009	1208	1.16	0.41	-----	-0.75
	55-64	1096	16	3	1805	1112	1.44	0.27	-----	-1.17
	65+	1242	18	8	2321	1260	1.43	0.63	0.34	-0.79
	5-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10-14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-19	11	2	1	50	13	-----	-----	-----	-----
	20-24	148	12	2	784	160	7.5	1.25	-----	-6.25
Level 4 Dvcd/Wdwd/Seprtd	25-29	443	26	11	1860	469	5.54	2.35	-----	-3.2
	30-34	690	38	22	2316	728	5.22	3.02	0.94	-2.2
	35-44	1453	72	27	3757	1525	4.72	1.77	0.71	-2.95
	45-54	1575	46	10	3826	1621	2.84	0.62	0.26	-2.22
	55-64	1908	28	12	4916	1936	1.45	0.62	0.24	-0.83
	65+	3490	82	13	11625	3572	2.3	0.36	0.11	-1.93

** Note: -----   represents values that are not significant according to the significance test.

      N/A   represents age groups that are not applicable to the corresponding variable.

MOTHER TONGUE	AGES	# of pple stay in Quebec	# of pple leave Quebec	# of pple enter Quebec	# of pple stay in rest of Can	pop. of Quebec in 1976	out-migratn rate (%)	in-migratn rate (%)	true in-migrtn rate (%)	net migratn rate (%)
	5-9	801	219	62	22858	1020	21.47	6.08	-----	-15.39
	10-14	1103	231	40	24340	1334	17.32	3	-----	-14.32
	15-19	1308	260	37	28380	1568	16.58	2.36	-----	-14.22
	20-24	1156	371	64	27724	1527	24.3	4.19	-----	-20.1
Level 1 English	25-29	928	352	123	24742	1280	27.5	9.61	0.49	-17.89
	30-34	1003	262	76	22406	1265	20.71	6.01	0.34	-14.7
	35-44	1513	344	58	30496	1857	18.52	3.12	-----	-15.4
	45-54	1372	221	25	24001	1593	13.87	1.57	-----	-12.3
	55-64	1456	158	17	22345	1614	9.79	1.05	-----	-8.74
	65+	1594	151	13	23317	1745	8.65	0.74	-----	-7.91
	5-9	7361	90	57	1005	7451	1.21	0.76	5.37	-0.44
	10-14	7763	58	43	1188	7821	0.74	0.55	3.49	-0.19
	15-19	10188	85	45	1569	10273	0.83	0.44	2.79	-0.39
	20-24	10842	205	65	1593	11047	1.86	0.59	3.92	-1.27
Level 2 French	25-29	9697	180	126	1538	9877	1.82	1.28	7.57	-0.55
	30-34	8795	128	114	1565	8923	1.43	1.28	6.79	-0.16
	35-44	13407	120	79	2327	13527	0.89	0.58	3.28	-0.3
	45-54	10918	64	38	2034	10982	0.58	0.35	1.83	-0.24
	55-64	8656	36	25	1735	8692	0.41	0.29	1.42	-0.13
	65+	7905	33	22	1690	7938	0.42	0.28	1.29	-0.14
	5-9	370	24	0	1738	394	0	0	-----	-----
	10-14	513	18	4	2119	531	3.39	0.75	-----	-2.64
	15-19	547	13	3	2601	560	2.32	0.54	-----	-1.79
	20-24	525	30	11	2709	555	5.41	1.98	-----	-3.42
Level 3 Minority Groups	25-29	486	55	18	3279	541	10.17	3.33	-----	-6.84
	30-34	611	68	20	4050	679	10.01	2.95	-----	-7.07

35-44	1153	92	19	7954	1245	7.39	1.53	-----	-5.86
45-54	1226	51	4	8891	1277	3.99	0.31	-----	-3.68
55-64	856	35	2	6845	891	3.93	0.22	-----	-3.7
65+	888	37	4	7383	925	4	0.43	-----	-3.57

** Note: -----   represents values that are not significant according to the significance test.

GENDER	AGES	# of pple stay in Quebec	# of pple leave Quebec	# of pple enter Quebec	# of pple stay in rest of Can	pop. of Quebec in 1976	out-migratn rate (%)	in-migratn rate (%)	true in-migrtn rate (%)	net migratn rate (%)
	5-9	4136	148	66	12455	4284	3.45	1.54	0.53	-1.91
	10-14	4603	142	34	13369	4745	2.99	0.72	0.25	-2.28
	15-19	5892	174	52	16023	6066	2.87	0.86	0.32	-2.01
	20-24	6232	297	84	15898	6529	4.55	1.29	0.53	-3.26
Level 1 Female	25-29	5570	274	140	14754	5844	4.69	2.4	0.94	-2.29
	30-34	5311	238	101	14045	5549	4.29	1.82	0.71	-2.47
	35-44	8059	251	73	20248	8310	3.02	0.88	0.36	-2.14
	45-54	6890	169	24	17213	7059	2.39	0.34	0.14	-2.05
	55-64	5781	131	23	16025	5912	2.22	0.39	0.14	-1.83
	65+	5991	137	27	18060	6128	2.24	0.44	0.15	-1.8
	5-9	4396	185	53	13146	4581	4.04	1.16	0.4	-2.88
	10-14	4776	165	53	14278	4941	3.34	1.07	0.37	-2.27
	15-19	6151	184	33	16527	6335	2.9	0.52	0.2	-2.38
	20-24	6291	309	56	16128	6600	4.68	0.85	0.35	-3.83
Level 2 Male	25-29	5541	313	127	14805	5854	5.35	2.17	0.85	-3.18
	30-34	5098	220	109	13976	5318	4.14	2.05	0.77	-2.09
	35-44	8014	305	83	20529	8319	3.67	1	0.4	-2.67
	45-54	6626	167	43	17713	6793	2.46	0.63	0.24	-1.83
	55-64	5187	98	21	14900	5285	1.85	0.4	0.14	-1.46
	65+	4396	84	12	14330	4480	1.87	0.27	0.08	-1.61

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