ETHNICITY, LANGUAGE ACCULTURATION AND MIGRATION IN CANADA

EFFECTS OF ETHNICITY AND LANGUAGE ACCULTURATION ON INTERPROVINCIAL MIGRATION PROPENSITIES IN CANADA: 1976-1981, 1981-1986 AND 1996-2001

BY

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PREFACE

My initial reason for choosing this topic was that I thought I had found some deficiencies in Trovato and Halli's papers (1983, 1990), in which they used "ethnic effects" to explain the differences in geographic mobility levels among 7 major ethnic groups in Canada, using the PUMFs (Public Use Microdata Files) of the 1971 and 1981 censuses. They reported some inconsistencies between their expectations based on the "ethnic effect" hypothesis and their empirical findings, especially for Ukrainians, who were expected to have a lower propensity to make long-distance migration than average, but appeared to be more migratory. Originally I thought that the inconsistencies were due to the fact that they did not control for the general effects of the major regional differences in the spatial economy of Canada and the specific economic situation during the period of 1976-1981 on the propensities to make interprovincial migration.

However, as I tried to reproduce their empirical work, I realized that although the spatial and temporal factors are important for the study of internal migration in Canada, the omission of them was not the main fault of the work. The real problem was not what Trovato and Halli failed to incorporate in their models, but how they interpreted their multivariate results.

Taking this discovery as one of the major findings, much more empirical work was then done to get a better sense of the real migration situation for the ethnic groups in not only 1976-81 but also 1981-86 and 1996-2001. The finding of the low mobility

levels of Italians and Jews led to the further step of testing the economic niche theory. When using the long-form records of 2001 census, the notice of the existence of new information made me carry out some additional work for the second-generation immigrants as well.

What needs to be clarified here is that Chapter 3 in this thesis is co-authored with Dr. Kao-Lee Liaw. The author's contributions include analysis of the data, development of tables, and the writing of the first draft as well as many discussions with Dr. Liaw.

ABSTRACT

The main purpose of this thesis is to study the effects of ethnicity and language acculturation on the propensities to make interprovincial migration in Canada for the 1976-81, 1981-86, and 1996-2001 time periods. To strengthen the plausibility of the idea that ethnic economic niches can reduce such propensities, the identification and assessment of ethnic economic niches are also conducted. Furthermore, the potential migration effects of the self-identification of being "Canadian" as a form of identity acculturation are also explored. The main data sources for the empirical work are the PUMFs (Public Use Microdata Files) of the 1981, 1986, and 2001 population census and the long-form records of the 2001 census.

Using the British as the mainstream ethnic group, multivariate analyses reveal that the main non-French minority ethnic groups, including Germans, Italians, Jews and Ukrainians, tend to be less migratory than the mainstream ethnic group and, except for Jews, are subject to the mobility enhancing effects of switching home language to English. Those who belong to the French ethnic group and use French home language are found to have either very low or very high interprovincial migration propensities, depending on whether they reside in Quebec or in the rest of Canada. For the French residing outside Quebec, the switch of home language to English has the effect of *reducing* these propensities.

Consistent with Roger Waldinger's theory, Italians and Jews, the two non-French ethnic groups with the lowest propensities to make interprovincial migration,

are found to have established ethnic economic niches and tend to benefit from such niches with respect to wage and the protection against unemployment.

For the second generation of German and Italian immigrants, the self-identification of being "Canadian" is shown to have no statistically significant effect on interprovincial migration propensities.

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I would like to thank Dr. Liaw, my supervisor, for his great help during my two-year study at McMaster University and my living in Canada. Without his patient guidance, I may not be able to conquer all those difficulties in the writing of this thesis.

Thanks to Dr. Harris for giving me advice on my first English academic essay and other members of the faculty of the department for leading me to a brand new academic world. Thanks to Ann, Darlene, Katharine and other staffs for solving all kinds of problems for me. Thanks to Sunny, Fei, Hejun, Sylvia and Alison for the support and sharing, and many other graduate students for their help.

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CHAPTER ONE

INTRODUCTION

With a long history of receiving immigrants from many parts of the world, Canada has been a multi-ethnic country. This basic demographic fact has made the assimilation and integration of ethnic minorities an important national concern. Being keenly aware of the serious harms incurred on Asian ethnic minorities and people of the First Nations by the racist and Euro-centric ideologies of assimilation and integration, the federal government in 1971 made Canada officially a multicultural country. It has become increasingly common to consider cultural diversity as a source of strength and to accept ethnic diversity as an inherent nature of the Canadian society. The current large annual intakes of immigrants from all continents of the world ensure the continual richness of this diversity.

Geographically, ethnic diversity contributes to the creation of a complex ethnic mosaic in Canada. Various perceived and actual benefits of living close to one's co-ethnics have made the land of Canada an ethnic mosaic: different ethnic groups tend to concentrate in different parts of the country. In addition to the heavy concentration of the French in Quebec, Italians are found to be strongly concentrated in Ontario and Quebec, whereas Germans and Ukrainians are overrepresented in Alberta, Saskatchewan, and

Manitoba. Among Asians, Chinese are strongly overrepresented in Ontario and British Columbia, whereas Indians and Pakistanis, despite the animosity between their countries of origin, are strongly concentrated in Ontario, often living peacefully in the same local communities.

Depending on such factors as the environments of their geographical concentrations, their cultural endowments, and their human capital, different ethnic groups may have different industrial/occupational concentrations. Being relatively concentrated in the prairies, Germans and Ukrainians are overrepresented in agriculture. Being endowed with skillful hands and strong bodies, Italians are overrepresented in construction industry. With a culture that strongly emphasizes the importance of formal education, Jews are more likely to hold well paying professional jobs, especially those in finance, medicine, and law. The feelings of affinity and trust among co-ethnics help strengthen the concentration of different ethnic groups in different industrial/occupational niches by limiting the entrance of non-co-ethnics, resulting in well-established ethnic economy.

The formations of ethnic mosaic and ethnic economic niches may be considered to be beneficial or undesirable from various perspectives. For newly arrived immigrants, they may be perceived as highly beneficial. For long-term immigrants, they may be a helpful basis for economic success (as demonstrated by the Italians in Toronto and Montreal) or a hindrance to upward socioeconomic mobility (as demonstrated by the Caribbean immigrants in the crime-ridden part of Toronto). For the unity of Canada as a

country, the concentration of Francophones in Quebec and non-Francophones in the rest of Canada is highly undesirable (as demonstrated by the near breakup of Canada in the 1995 referendum on "sovereignty association" in Quebec). Although the spatial concentrations and industrial/occupational niches of non-French ethnic minorities are not expected to result in a serious disaster of such a magnitude, it may be assumed that a trend towards a greater spatial mixing between ethnic groups and the reduced importance of ethnic economic niches is beneficial for Canada as a whole.

In addition to the long history of receiving large numbers of immigrants that has contributed to the formation of an ethnic mosaic and ethnic economic niches, Canada has also been moving towards the principles of equality and universality. Unequal treatments by race, ethnicity, sex, and age have been outlawed in the work place and the society in general. Public insurance in employment, healthcare, and income maintenance for the elderly have become universal. These principles have the potential of undermining the persistence of ethnic mosaic and ethnic economic niches.

One of the mechanisms that can contribute to the geographic mixing between ethnic groups and to the weakening of ethnic economic niches is migration. The socioeconomic context based on the principles of equality and universality may reduce the importance of the benefits of remaining in an ethnic community or an ethnic economic niche so that labor market forces play an important role in the migration process. For example, the sharp increase in employment opportunities in Alberta as a consequence of the rapid expansion of the energy industry in the late 1990s resulted in

Alberta's net gain of migrants of all ethnic backgrounds.

However, migration is a highly complex process that is subject to the influences of many factors. Of particular interest is that the lifetime migration of the Francophones and non-Francophones over a long stretch of time that spanned the rapid economic growth of the 1950s and 1960s did not result in a greater mixing. Instead, the two groups become somewhat more spatially polarized (Liaw and Qi, 2004).

The main purpose of this thesis is to study the role of ethnicity on the propensities to make interprovincial migration. My main research questions are as follows. Do different ethnic groups have inherently different propensities to make interprovincial migration? If yes, how can these differences be meaningfully characterized? Do these differences prevail through the fluctuations in the spatial economy? Can a trend in these differences be identified? What are the underlying reasons for these differences? Is it true that those with lower propensities to make interprovincial migration have better established ethnic economic niches? For the second generation of the immigrants, are the acculturated more likely to make interprovincial migration? To answer these questions, I use the PUMFs (Public Use Microdata Files) of the 1981, 1986, and 2001 population censuses of Canada as well as all long-form records of the 2001 census.

The organization of the rest of this thesis is as follows. Chapter 2 makes a broad review of the literature on the ethnic effects on migration, assimilation and its competing theories. Chapter 3 conducts a fairly thorough investigation of the roles of ethnicity and language acculturation on the propensities to make interprovincial migration in a

multivariate framework. Chapter 4 studies the existence and the strength of ethnic economic niches for different ethnic groups. Chapter 5 studies the acculturation of the second generation of the immigrants and how the acculturation may affect the propensities to make interprovincial migration. Chapter 6 summarizes the main findings. Some less important findings are shown in the appendices. Appendix A shows the distribution of ethnicities and interprovincial migration propensity of each ethnicity in each province in Canada for the three census periods of 1981, 1986 and 2001. Appendix B studies the educational effect on ethnic migration using the 2001 census. Appendix C conducts an investigation of the Germans and Ukrainians' economic niches in agriculture industry.

CHAPTER TWO

LITERATURE REVIEW

ETHNICITY, ASSIMILATION AND MIGRATION

In multiethnic countries like Canada and the United States, research on ethnicity has mainly focused on how minority ethnic groups are integrated into the mainstream society and on how the complementary and competitive relations between ethnic groups evolve in the changing socioeconomic and political contexts. The scope of the literature is much broader than the scope of my empirical investigation in this thesis.

The literature review of this chapter is divided into two parts. The first part deals with the issues of the integration of ethnic minorities and their complex relationships. The second part deals with the effects of ethnicity on migration propensities.

2.1 Literature on the Integration and Interactions of Ethnic Groups

2.1.1 The Rise and Decline of the Assimilation Theory

For more than a generation, sociologists studying immigration and ethnicity have been classified into two streams, "assimilationist" and "pluralist". The assimilation theory, as it evolves through time, had been the dominant one for a long time, because of its amazing power in explaining the adaptation of the so-called "old immigrants", the

European immigrants who came to the U.S. around a century ago, to the American host society. Park and Burgess (1969, p.735) brought forward an early definition of assimilation, "a process of interpenetration and fusion in which persons and groups acquire the memories, sentiments, and attitudes of other persons and groups and, by sharing their experience and history, are incorporated with them in a common cultural life." Following this concept, the early literatures on assimilation are somewhat ambiguous because they fail to distinguish the differences among various kinds of assimilation.

Then, later, Milton Gordon (1964), one of the most important sociologists in the development of the assimilation theory, ended the early confusion phase with his idea of dividing assimilation into multidimensional formulations. He emphasized the differences between culture and society, and defined seven types of assimilation, ranging between "acculturation" (i.e. the new comers' adoption of the culture patterns of the host society) and "structural assimilation" (i.e. the entrance of a minority group into the social cliques, clubs, and institutions of the core society). In his opinion, acculturation typically occurs first, while the occurrence of structural assimilation is always followed by other kinds of assimilation. His analysis, as Alba and Nee (1997) indicated, leads to the conclusion that acculturation is nearly inevitable, but not structural assimilation, and that "structural pluralism rather than cultural pluralism is the more accurate description" (p.832) for the American society. However, the assimilationists after Gordon did not appreciate this part of his work, and brought out a more deterministic "straight-line assimilation" theory

(Gans, 1973; Sandberg, 1973), which argues that the assimilation is taking place to a larger and larger extent through successive generations, based mainly on the studies of the European immigrants.

As the new wave of post-WWII immigrants, consisting mainly of the Asians and Latin Americans, poured into the U.S. as a result of 1965 immigration law reform, the assimilation theory started to receive less support. In his paper with the name "Is Assimilation Dead", Glazer (1993) claimed that "assimilation today is not a popular term" (p.123). On the contrary, pluralism, which admits that acculturation is indeed happening but without other kinds of assimilation, became more prevalent. The pluralists claim that instead of gradually adopting the American style of living and losing the connections with their original minority groups, immigrants have always retained a significant tie to their ethnic heritage (Gans, 1997).

Meanwhile, there are scholars trying to reconcile the two theories and to prevent further polarization or total abandon of the assimilation theory (Alba and Nee, 1997; Gans, 1997). Alba and Nee (1997) showed some evidence of socioeconomic and residential assimilation, two other dimensions of Gordon's seven assimilation types, of the recent immigrant groups to prove the existence of assimilation in contemporary society. They did not deny the limitation of the classical assimilation theory though, and try to improve it with the idea of "interplay". They redefined assimilation as "the decline, and at its end point the disappearance, of an ethnic/racial distinction and the cultural and social differences that express it" (p.863). From their point of view, assimilation does not

necessarily mean the new comers' giving up of their own ethnic relationships and melting into the new host country, but could also be the interaction among the majority and several different minority groups, and the final assimilation might be reached at a compromised point of all the groups.

Gans (1997) argued that assimilation does not just stop, but that some adjustment should be made to the theory to fit the new situation. He thought that acculturation is one of the most important kinds of assimilation that is emphasized by its supporters, while pluralism also has the meaning of "becoming American culturally but not necessarily socially" (p.876). In his view, these two concepts overlap to some extent, especially in terms of empirical studies, and new division is needed for the immigrants' adaptation patterns. Therefore, he recommended the use of the terms "acculturationists" and "retentionists" (i.e. those who avoid acculturation and retain their ethnic ties) as two positions of the ethnic research. He further analyzed the uniqueness of the time when assimilation theory won overwhelming support, and explained the good fit of the theory for the old European immigrants as a result of the following reasons. (1) The economy kept growing relatively fast so that at that time, to get a job and make socioeconomic assimilation, the minority did not even need to be able to speak English. (2) European immigrants enjoyed the advantage of their less distinct skin colors, so that even though considered as "darker" races when they first came, they the could become "white" far more easily than today's Latin American and Asian immigrants. (3) The old immigration wave was quickly followed by the hiatus phase in the 1920s so that there was no new

blood of the minority culture coming to sustain the ethnic communities. By contrast, the new ethnic groups are still quite young, mostly at their first, 1.5, or second generation, and are continually replenished by the mass inflow of their co-ethnic immigrants, this situation will last a much longer time than their pioneer European immigrants. With these conditions, together with the current economic environment and their phenotypic differences from the majority white people, the assimilation process, which in Gans' opinion will surely take place, will appear much slower than before.

2.1.2 Some Competing Theories of the Assimilation Theory

Dual Labour Market Theory & Globalization Theory

From the point of view of these two theories, the ethnic distinctions in the society are greatly reinforced, if not caused, by the differences of the economic status of different groups in the labour market. As long as the economic segregation remains unchanged, the distinctions will persist.

The dual labour market theory (Saint-Paul, 1997; Piore, 1979) claims that good and bad jobs coexist within the same economy, or even within the same firm. The non-immigrants have certain preference among various of positions in the labour market and they would rather be unemployed than accept secondary occupations, while minority immigrants are forced to take those demeaning jobs that the majority members are not willing to have, since there are no other better chances for them. This theory implies that the immigrants are and probably will continue to be trapped in such a disadvantaged

socioeconomic position.

Later, Saskia Sassen (1991, 1998) used the dual labour market theory as a foundation stone for her well-known globalization theory. According to Sassen, the economic structure of today's big cities in capitalist countries is like an hourglass, with sufficient opportunities at both upper and lower ends of the labour market. This situation occurs when large companies relocate their factories to the less developed countries, where they can find much cheaper labour, and concentrate their headquarters into several global cities, where they create many highly paid jobs. Then low-end positions appear in service sectors to satisfy the needs of the white-collar workers. Unfortunately for the immigrants, chances are rare for them to get jobs from the upper part of the hourglass due to various reasons, such as the inability to communicate in English language or the maladjustment to the new society and so on. Being forced down to the lowest socioeconomic hierarchy at the entry of the country, and lacking the middle class jobs through which they could gradually move upward, the immigrants will have to suffer a long time economically.

Well-known as the globalization theory is, it has received some negative comments. Roger Waldinger (2000) considered the theory as just telling one side of the story. Using his careful empirical work on postindustrial New York City's economy as evidence, Waldinger argued that if the causal relationship is like what Sassen has explained, it is unclear why the immigrants have successfully settled down to the demeaning works, while the native blacks, who are also discriminated and poorly

educated, are excluded and doing worse and worse in the economy.

Ethnic Economic Niche Theory & Ethnic Enclave Theory

Disagreeing strongly with the globalization theory, Waldinger (2000) brought up his ethnic economic niche theory to account for the minority socioeconomic status in New York City. The social hierarchy implications of different sectors or jobs in the economy are not emphasized in this theory, but the concentration of ethnic groups in certain industries, which is inevitable according to Waldinger, is considered to be important. Once a minority group is overrepresented in an industry, and forms a qualified niche, a relatively isolated environment is created. The ethnic members in the niche are better paid and less likely to be unemployed. By contrast, people of other ethnic groups, if they are not in the industry yet, have difficulty in getting information about the economic opportunities, not to mention getting jobs. If they are already in the industry, there is hardly any chance for them to catch up with their counterparts in terms of economic well-beings[1].

Alba and Nee (2005), being assimilationists themselves, criticized the above theory for assuming that all the niches are "good", and for assuming that the ethnic members remain in the niches because they could get some kind of benefit. Niches, such as in the ethnic restaurant or garment industries, as they say, usually provide low pay.

[1] More introductions about his theory could be found in Chapter 4.

People in those niches are actually running out of choices, and if given more alternatives, they will be more than happy to quit the current jobs.

A better-developed minority sub-economy than the one described in the ethnic economic niche theory is called the ethnic enclave (Portes and Bach, 1985; Portes and Manning, 1986; Bailey and Waldinger, 1991; Zhou, 1992), where there are numerous firms in which ethnic bosses employ co-ethnic workers. An enclave could encompass many ethnic niches, while an ethnic niche does not need to belong to such an ethnic economy. In an enclave, the ethnic business owners tend to hire new employees through current co-ethnic workers from their own ethnic community, and the workers usually work hard since there are all kinds of relationships beyond the job that they could not afford to break. The ethnic enclave theory claims that both employers and employees benefit from such a network. The bosses could get more reliable, hardworking and most of the time cheaper labour, while the employees avoid the discriminations in the mainstream society, and enjoy more sense of security about the job they are holding, and more important, they are given the chance to pick up some skills through the informal training systems of the community.

Some scholars have their doubts about the win-win situation of an ethnic enclave, and challenge the theory with their research which shows that the major economic advantages are taken by the owners rather than the employees (Alba and Nee, 2005; Sanders and Nee, 1987). If the economic benefits they are referring to are just the wages, yes, indeed, most of the ethnic workers are not as well paid as those who hold similar

jobs but are not in the enclave. However, taking account of the free learning process enjoyed by the ethnic workers, the expression of the employees' disadvantaged position seems to be overstated.

The ethnic niche/enclave theories link the social problem of multiple ethnicities with the minorities' economic performances, and provide us with their well-developed mechanisms of how the people in various ethnic groups find their own way to make better lives in the host society. Besides, the way of thinking the achievement of the economic goals by ethnic minorities as a *collective* rather than an *individual* effort also deserves much appreciation in future studies.

Segmented Assimilation Theory

The segmented assimilation theory could be considered to be intermediate between assimilation theory and the ethnic niche/enclave theories. According to this theory, the outcomes of the adaptation process of the immigrants from the same ethnic group could be different (Portes and Zhou, 1993; Portes, 1998; Waters, 1994). Some of the ethnic members may follow an upward trend and experience the assimilation into the mainstream, while others can not help go downward and assimilate into the local poor. Various reasons could have caused the distinctions. Those who come with relatively rich human and monetary capitals are more likely to climb up the social hierarchy, and those who receive more aid from the host government when they first enter the country tend to have better lives. For dark-skinned immigrants from Latin American, those who

are exposed more to the native blacks suffer more from discrimination and downward assimilation.

The contribution of this theory lies in the idea that assimilation into the mainstream society is not necessarily the only possible form of assimilation. Although this theory seems to be more appealing than the conventional assimilation theory, it is difficult to judge whether the assimilation in question is upward or downward. Apparently, some of the second or third-generation immigrants have made no more economic improvement than their parents and still work in the same industry and earn the same income, but they might not need to work as hard, or may become able to provide their children with better educational opportunities than they used to have. Some of the improvements could be "invisible" if an improper methodology is applied (Alba and Nee, 2005).

2.2 Literature on the Effects of Ethnicity on Migration Propensities

2.2.1 The Origin of the Minority Issue

Early studies about the effects of ethnicity on the propensities to migrate are mainly on the black-white differences. Bogue (1969) and Marsh (1967) both showed that with the control for certain individual socioeconomic factors (SEF), blacks show a lower propensity to migrate than their white counterparts, which means that being a black itself could influence the mobility level in a negative way. After reviewing the research on the causes of migration, Ritchey (1976) also summed up the studies on black-white

migratory differences by stating that there are "lower migration rates among the minority group than among the majority group" (p.393). Lansing and Mueller (1967), though did not lay stress on racial or ethnical discrepancy, made their contribution by testing and pointing out the significance of the effects of community and kinship on migration, which could be used to account for the differences in migration propensities between ethnic groups that are similar in socioeconomic status. By interviewing people about their plans to migrate, they found that the presence-of-family and the presence-of-friends differentials were very strong in the sense that those who had family or friends in the area of current residence made much less migrations than those without this kind of ties.

Uhlenberg (1973) also pursued this line of reasoning. He noticed the blacks' limited out-migration from the southern part of the United States during the period of 1860-1920, despite many "push" factors in the South and the "pull" factors from the North. He tried to explain this anomaly as a result of the blacks' strong ties to their local community. He hypothesized that "the more involved one is in a network of family ties the greater the constraints upon potential migration,"(p.304), and that "those with (1) deep roots in a community; (2) strong kinship ties in the local area; (3) large investments in the community and (4) an in ability to assimilate easily into a new social environment are likely to resist migration"(p.309).

There is some problem with Uhlenberg's theory. If the small volume of out-migration was caused by the strong ethnic community's retention power on its members, why after World War I, did the so-called "Great Migration" occur? Johnson and

Campbell (1981) argued that after WWI, there was a tremendous reduction in the supply of European immigrant labour to the U.S., who had accounted for a large proportion of the labour force in the big cities in the north since the rising of the northern industries. Due to the lack of labour, the employers began to recruit blacks from the south, who were obviously not a preference. From Johnson and Campbell's point of view, before the WWI, despite the fact that there were plenty of jobs in the North, the blacks did not have the luck to take the opportunities, while after WWI, they were given such chances. Taking this argument into account, Uhlenberg's theory may not be a proper tool to explain the low mobility of the blacks, however, it might be a suitable explanation for the other case in his study, the case of the low migration propensity of the Japanese-American from the internment camps during WWII (1973).

2.2.2 The Generalization of the Issue

Following this track, researchers began to discuss more general problems. Studies were no longer limited to only the blacks and whites, but also among other minority ethnic groups. It is then when "ethnicity" became one of the most important units for comparing and analyzing the differences in migration rates. The following themes provide us some possible ways to understand how ethnic origin itself affects the propensity to migrant.

Community and Kinship Ties and Institutional Completeness

The friends and family ties within an ethnic group could prevent its members from moving out or draw its members to move in the community (Lansing and Mueller, 1967; Uhlenberg, 1973).

Breton (1964) claimed that "the direction of the immigrant's integration will to a large extent result from the forces of attraction (positive or negative) stemming from the various communities", and that "these forces are generated by the social organizations of the communities"(p.193). Therefore, as a consequence of the balance of these forces from a person's own ethnic group, the native society and other minority groups, the integration could be decided dynamically. He used the degree of "institutional completeness" to describe how well an ethnic community could perform services required by its members. If all his needs can be satisfied within the group, a person will have no tendency to create social ties with outsiders. Otherwise, he will have to. A sample of 230 male immigrants in Montreal were interviewed about their interpersonal relations (proportion with majority of their personal relations), and numbers of churches, welfare organizations, newspapers and periodicals were used to measure the degree of institutional completeness. By cross tabulating the above information, he reached the conclusion that an ethnic community with more complete institutions does hold its members better.

Structural Insecurities

The potential effects of a minority group's sense of "insecurity" on their demographic behaviors were first investigated in the studies of minority fertilities. Being a marginalized and discriminated part of the host country, the members of the minority ethnic groups are expected to live under the pressure of the larger society. As Kerckhoff and McCormick (1955) said,

> ...[H]e will suffer the effects of uncertainty, ambivalence, and the fear of rejection and failure....No matter what he does, he is faced with serious problems, he is required to be constantly aware of the abnormal position he occupies in relation to other people, and he must be exceptionally sensitive to slight variations in the behavior of others in relation to himself. (p.50)

In order to move upward, they have to struggle harder, and one of the ways is to limit their family sizes below the national average level (Goldscheider and Uhlenberg, 1969; Richey, 1975; Jiobu and Marshall, 1977; Bean and Frisbie, 1978; Lopez and Sabagh, 1978). Goldscheider and Uhlenberg (1969) further gave some conditions under which the insecurities reduce the fertility level.

> ...[T]he insecurities of minority group membership operate to depress fertility below majority levels when (1) acculturation of minority group members has occurred in conjunction with the desire for acculturation; (2) equalization of social and economic characteristics occurs, particularly at middle and upper social class levels, and/or there is a desire for social and economic mobility; and (3) there is no pronatalist ideology associated with the minority group and no norm discouraging the use of efficient contraceptives. (p.372)

Later, this concept is borrowed to explain the mobility patterns of the ethnic groups. As Lee (1966) pointed out, the diversity of people inevitably leads to discrimination among groups, which sometimes forms ghettos and holds ethnic members from moving, while

sometimes causes people to run away from it and thus brings about mass movement from one area to another. Trovato and Halli (1983) incorporated this concept into the review part of their paper as a possible reason for the minority's low mobility level in Canada. However, maybe due to the difficulty in simulating the hypothesis in a quantitative way, they did not go very far along this line in the following empirical study and dropped the hypothesis completely in their next paper focusing on the similar topic (Trovato and Halli, 1990). Thus the structural insecure hypothesis, though appealing theoretically, may not be easy to apply in an empirical work.

Historical Effects

Kobrin and Goldscheider (1978) mentioned the so-called "historical effects" aspect, which could be briefly described as, when some ethnic group starts to immigrate to a foreign country, settles down in certain area and remains there ever since because of the group's successful adjustment to that specific region, its members' mobility level could be relatively low, such as Italians in Toronto, Montreal and Vancouver and French in Quebec (Trovato and Halli, 1983).

From the next chapter, with the guidance of some of the theories above, a series of empirical work will be done with respect with the relationship between ethnicity, assimilation and migration.

CHAPTER THREE

THE ROLES OF ETHNICITY AND LANGUAGE ACCULTURATION IN DETERMINING THE INTERPROVINCIAL MIGRATION PROPENSITIES IN CANADA: FROM THE LATE 1970s TO THE LATE 1990s

3.1 Introduction

Interprovincial migration is an important demographic process that allows the timely adjustment of labor supply to the changing demand for labor in the spatial economy of Canada so that the productivity of the whole economic system is sustained at a high level. It is also an important option chosen by many Canadians to improve their economic and career prospects. In light of these economic significances, it is not surprising that the most commonly used theories for studying interregional migration in Canada has been the neoclassical economic theories, especially the human capital investment theory (e.g. Courchene, 1970 and 1974; Grant and Vanderkemp, 1976; Liaw, 1990; Newbold and Liaw, 1994). Although early research findings by economists revealed some difficulties in explaining the interprovincial variations in the volumes and rates of out-migration by labor market variables such as wage level and unemployment rate, these difficulties have largely disappeared after it became possible to classify the at-risk population into natives, non-natives, and the foreign-born (Liaw, 1990) and to

separate interprovincial migrants into primary, return and onward migrants (Newbold and Liaw, 1994).

Much less attention has been paid to the cultural and political significance of interprovincial migration in Canada. For example, the short-term and long-term impacts of the 1977 introduction of an anti-English law in Quebec on the out-migration rates of non-Francophones in Quebec were probably not well appreciated by the policy makers in the Quebec government. This law has helped sustain Quebec's net loss of interprovincial migrants every year, irrespective of the fluctuations in Quebec's economy. It turned out that Quebec's net loss of non-Francophone migrants has been so large that interprovincal migration has not resulted in greater mixing of Francophones and non-Francophones. Instead, it has aggravated their spatial polarization between Quebec and the rest of the country (Newbold, 1996; Liaw and Qi, 2004). This spatial polarization and Quebec's diminishing share of the Canadian population as a consequence of its persistent net loss of interprovincial migrants have probably served as fuel for the separatists' movement in Quebec.

Other than the French/non-French contrast, relatively little is known about ethnic selectivity in interprovincial migration in Canada and its underlying reasons. Trovato and Halli (1983, 1990) carried out multivariate analyses of the effects of ethnicity on the propensities of making interprovicial and other kinds of migrations as well as local moves, based on the micro data of the 1971 and 1981 population censuses. Unfortunately, due to their failure in interpreting the estimated parameters properly, part of their main

inferences on interprovincial migration turned out to be misleading. In light of the fact that Canada is a multi-ethnic country, further research on the ethnic selectivity in interprovincial migration in Canada is undoubtedly worthwhile.

As different ethnic groups acculturate into the mainstream of the Canadian societies at different speeds and in various ways, their propensities to make interprovincial migration may be differentially affected. For an ethic group with well-established upper-class communities (e.g. the Jews), acculturation may have little effect on their propensities to make long-distance migration. For an ethnic group rooted mostly in working-class communities (e.g. the Italians), its effect may be substantial. It is thus useful to study how the acculturations of different ethnic groups affect their migration behaviors.

The main purpose of this chapter is to study, in a multivariate context, the effects of *ethnicity* and *language acculturation* on the propensities to make interprovincial migration in Canada. The importance of using a multivariate context has been clearly demonstrated by Otomo and Liaw (2003) with a simple example about the assessment of the effect of educational attainment on the propensities to make interprefectural migration at marriage in Japan. The example shows that the control for a highly collinear and more important factor, namely gender, turned out to be crucial. With the control, the estimated coefficient of educational attainment turned out to be positive and statistically highly significant, implying that the higher the educational attainment, the greater the migration propensities. Without the control, the coefficient became negative and also statistically

significant (i.e. significantly nonsensical).

The data for this study are the micro data of the 1981, 1986, and 2001 population censuses, specifically the PUMFs (Public Use Microdata Files) of the 1981 and 1986 censuses and the full set of long-form records of the 2001 census via remote access from the Research Data Center at McMaster University. The migration information comes from the question on the place of residence five years before the census date. Thus, the time intervals used to observe interprovincial migration are 1976-1981, 1981-1986, and 1996-2000. Following the specification of Trovato and Halli (1983 and 1990), the Canadian population is divided into 7 ethnic groups: British, German, French, Jewish, Italian, Ukrainian, and Other. British, French, German, Italian, Ukrainian were the largest ethnic groups in 1981, whereas the Jewish group had the distinctive feature of high educational attainment combined with low interprovincial migration propensity. In this chapter, the British is considered as the *mainstream* ethnic group, whereas the others are considered as *minority* ethnic groups.

The generality of the findings of this study is likely to be enhanced by the fact that the spatial economy of Canada was rather different among these three time intervals: an economic boom in Alberta and British Columbia accompanied by the weakening of manufacturing industry in Ontario during 1976-1981; a nationwide economic recession that was much more serious in Alberta and British Columbia than in Ontario during 1981-1986; and the strengthening of the economies of Alberta and Ontario accompanied

by an economic downturn in British Columbia during 1996-2001.[1]

The organization of the remaining part of the chapter is as follows. Section 3.2 clarifies the misleading interpretations in Trovato and Halli's multivariate analyses. Section 3.3 presents the guiding hypotheses for the empirical investigation to be carried out in this chapter. Section 3.4 describes the specification of the binomial logit model, the selection of explanatory variables, and the methods for assessing the relative explanatory powers of different subsets of explanatory variables. Section 3.5 reports the empirical findings. Section 3.6 summarizes the main findings.

3.2 Misleading interpretations in Trovato and Halli's Multivariate Analyses

The main purpose of the two multivariate analyses of Trovato and Halli (1983 and 1990) is to study the effects of ethnicity on the propensities to make a choice among five kinds of mutually exclusive relocation alternatives: (1) remaining at the same address, (2) moving within the same census subdivision, (3) migrating between census subdivisions but within the same census division, (4) migrating between census divisions but within the same province, and (5) migrating between provinces. The variable representing these

[1] These contrasts are well reflected by the average annual employment growth rates in the three periods. In 1976-1981, the employment growth rates were 6.49% for Alberta, 4.36% for British Columbia, and 2.75% for Ontario, compared with 2.96% for Canada (including the 10 provinces only). In 1981-1986, the employment growth rates were 1.94% for Ontario, 0.11% for British Columbia, and –0.00% for Alberta, compared with 1.17% for Canada. In 1996-2001, the employment growth rates were 2.98% for Alberta, 2.74% for Ontario, and 1.13% for British Columbia, and compared with 2.15% for Canada.

choices was called *type of move* or simply *migration*. The first study was based on a sample of persons (aged between 20 and 70) taken from the PUMF of the 1971 census, whereas the second study was based on a sample of people (aged 20 and over) taken from the PUMF of the 1981 census.

In the first study, the sample was divided into two sub-samples, corresponding to the 20-29 and 30-70 age groups, respectively. For each sub-sample, a log-linear model was used to study the relationships among migration, ethnicity, and education. The estimated parameters for each sub-sample were presented for three two-way interactions: (migration * ethnicity), (migration * education), and (ethnicity * education). Based on the estimated parameters involving the (migration * ethnicity) interaction for the 20-29 age group, it was stated that "Persons belonging to Ukrainian, Jewish, French and British ethnicity, in that order, tend to be more inclined towards migrating to a different province (MDP) during the time interval 1966-1971" (Trovato and Halli, 1983, p.259). While ignoring the obvious misprinting of "German" as "French", it is puzzling that this order of ethnic groups was inconsistent with the order based on the observed interprovincial migration rates: 6.5% for Germans, 6.1% for the British, 5.7% for Ukrainians, 3.5% for Jews, 2.7% for the French, and 1.8% for Italians. Although there was not enough information in the original paper to help explain this inconsistency, it is highly unlikely that after controlling for age and education, the Jewish ethnic group could indeed have the second highest propensity to make interprovincial migration.

In the second paper, more information was made available so that it is possible to find out the reason for their misinterpretations of their multivariate result. Although the authors stated that they used a logit model, it was actually a modified form of log-linear model in which migration can be considered as a dependent variable.[2] The purpose of the multivariate analysis was to study the migration effects of ethnicity, home language, and their interaction, while controlling for the effects of education and age. With respect to interprovincial migration, their estimated parameters (called "logit parameters" in their paper) are reproduced in Table 3.1. Within each of the five blocks of parameters, the product of the parameters has been constrained to 1.0 so that a variable with a parameter larger than 1.0 is supposed to have an enhancing effect on the migration propensity, whereas a variable with a parameter less than 1.0 is supposed to have a reducing effect on the migration propensity.

Contrary to their reasonable presumption that Ukrainians, due to their relatively complete ethnic institutions, should have a lower propensity to make interprovincial migration than the British, they interpreted the finding that the parameter for Ukrainians (1.467) turned out to be greater than the parameter for the British (1.241) as an indication that Ukrainians were more prone to making interprovincial migration than the British. Although they did find that the observed interprovincial migration was lower for Ukrainians (6.5%) than for the British (7.1%), they thought that their multivariate finding

[2] According to Paul D. Allison (2001, p.233), conventional log-linear models "do not have an explicit dependent variable, at least not one that corresponds to any conceptual variable".

was more meaningful and then made the following misleading statements.

> The fact that the Ukrainians in 1976-81 are more inclined to change province in relation to the British may reflect a genuine change in this ethnic group's orientation to long distance migration, as in the 1966-71 period they were significantly below the British in the propensity for long distance migration. The underlying mechanisms for this reversal is[sic] a question worth pursuing in subsequent research. (Trovato and Halli, 1990, p.87)

With respect to their hypothesized effects of assimilating into the English language on increasing the odds of making interprovincial migration, they based their assessments on the parameters in the third block of Table 3.1 and made the following interpretation.

> The evidence is not supportive of this notion. The only exception is the French who show that having English as the language of the home enhances propensities to change province. Beyond this ethnic group, the Jews come close to supporting the hypothesis in that the odds of changing province for Jews who speak English in the home are 1.21, while they are 1.25 for those who speak an "Other" language. It is interesting to note that for the "Other" and Ukrainian ethnic groups, the lowest odds of long distance moves is associated with English home language. Clearly, linguistic assimilation is not a major factor in the case of interprovincial migration propensities. (Trovato and Halli, 1990, p.87).

Unfortunately, their interpretations shown in the above two paragraphs are wrong, because the estimated parameters can not be interpreted in such a straightforward way. In order to interpret the estimation result properly, these parameters should be used to generate a set of odds ratios that is based on a well defined group, say, the English-speaking British. This is demonstrated in Table 3.2. The estimated parameters in Table 3.1 are rearranged into a rectangular form in the first panel of Table 3.2. This rearrangement makes it clear that for any group that is defined by ethnic origin and home

language simultaneously, the migration propensity of the group is affected by the product of three parameters. For example, consider English-speaking Italians. The relevant indicator is the product of 0.593 (for Italian), 1.592 (for English), and 0.919 (for Italian*English). This product turns out to be 0.868. Such products for all combinations of ethnicities and home languages are shown in the middle panel of Table 3.2. They are called "combined" parameters. Using the English-speaking British as the reference group, the odds ratios in the bottom panel are computed by dividing the combined parameter of the reference group into those of all groups.

The odds ratios in the third panel clearly show that the Ukrainians who continued to speak the "Other" language (mostly their own traditional language) at home were less prone to making interprovincial migration than were the English-speaking British (the "mainstream" ethnic group), because the odds ratio is 0.737 for these Ukrainians. More generally, the odds ratios imply that all the ethnic minorities that had not changed to using English as the home language were less prone to making interprovincial migration than the English-speaking British.

How about the minority ethnic groups that had switched to English home language? The odds ratios imply that for every minority ethnic group, this switch was associated with an increase in interprovincial migration propensity.

Table 3.1. "Logit Parameters" of the Model for Explaining the Propensities to Make Interprovicial Migration in 1976-1981.

EFFECTS	Estimated "Logit Parameters"
ETHNICITY	
British	*1.241*
French	*0.779*
German	*1.103*
Italian	*0.593*
Jewish	*0.892*
Ukrainian	*1.467*
Other	*1.209*
LANGUAGE	
English	1.592
French	0.660
Other	0.949
LANGUAGE * ETHNICITY	
ENGLISH *	
British	0.857
French	1.674
German	0.943
Italian	0.919
Jewish	1.214
Ukrainian	0.769
Other	0.862
FRENCH *	
British	0.909
French	0.929
German	0.828
Italian	1.400
Jewish	0.659
Ukrainian	1.451
Other	1.068
OTHER *	
British	1.283
French	0.643
German	1.280
Italian	0.777
Jewish	1.251
Ukrainian	0.896
Other	1.086

Source: Trovato and Halli (1990), pp.85-85.
Note: EDUCATION and AGE were used as control factors in the model. For EDUCATION, the estimated parameters are: 0.742 (primary), 1.182 (secondary), and 1.141(post-secondary). For AGE, the estimated parameters are: 1.210 (20-29), and 0.827 (30+).

Table 3.2 The Odds Ratios of the Interprovincial Migration Propensities.

Ethnicity	Marginal	Home Language: English	Home Language: French	Home Language: Other Language
		A. Reported Parameters:		
Marginal		1.592	0.660	0.949
British	1.241	0.857	0.909	1.283
French	0.779	1.674	0.929	0.643
German	1.103	0.943	0.828	1.280
Italian	0.593	0.919	1.400	0.777
Jewish	0.892	1.214	0.659	1.251
Ukrainian	1.467	0.769	1.451	0.896
Other	1.209	0.862	1.068	1.086
		B. Combined Parameters:		
British		1.693	0.745	1.511
French		2.076	0.478	0.475
German		1.656	0.603	1.340
Italian		0.868	0.548	0.437
Jewish		1.724	0.388	1.059
Ukrainian		1.796	1.405	1.247
Other		1.659	0.852	1.246
		C. The Implied Odds Ratios, relative to English-speaking British:		
British		1.000	0.440	0.892
French		1.226	0.282	0.281
German		0.978	0.356	0.791
Italian		0.512	0.324	0.258
Jewish		1.018	0.229	0.625
Ukrainian		1.061	0.830	0.737
Other		0.980	0.503	0.736

Source: Implied bythe Estimated Parameters of Trovato and Halli (1990) from Table 3.1.

Clearly, the above two main substantive interpretations made by Trovato and Halli are contrary to what their multivariate output actually revealed. In addition to their interpretational errors, there is a concern about the control for only two other explanatory factors (educational attainment and age) in their multivariate analysis. Shouldn't other powerful factors such as nativity status and geographical variations (e.g. Quebec as the homeland of Francophones, and the contrast between the "have" and "have not" provinces)? Their reason for controlling for only educational attainment and age was to avoid having many zero cells (p.80). But, with the use of the real logit model and the maximum likelihood method, zero cells are no longer a technical problem.

3.3 Guiding Hypotheses

Although a recent study has shown that newly-arrived immigrants are more prone to making interprovincial migration soon after landing than both the Canadian-born and the immigrants with longer residency in Canada (Liaw and Xu, 2005), there are several reasons for expecting that the propensities to make interprovincial migration are lower for minority ethnic groups than for the mainstream ethnic group. At the time of landing in Canada, many immigrants of a minority ethnic group have a strong tendency to live close to their co-ethnics so that ethnic communities are formed and expanded. The socioeconomic benefits conferred by one's own ethnic community (e.g. various services provided by co-ethnic institutions and economic benefits from ethnic economic niches) may reduce the incentive and necessity to move away (Breton, 1971; Darlington, 1998;

Waldinger, 2000). Language and other cultural barriers as well as the potential of being discriminated by the mainstream ethnic group tend to weaken the confidence in adjusting successfully to the socioeconomic context of a different province. Thus, it is hypothesized that *the propensities to make interprovincial migration are lower for minority ethnic groups than for the mainstream ethnic group.*

Acculturation, especially with respect to language, has the potential of reducing the barriers between minority ethnic groups and the mainstream ethnic group. It may also help reduce discrimination and open up more job opportunities outside one's own ethnic economic niches. In light of these effects, it is hypothesized that *the use of English as home language, which represents an important cultural shift towards the mainstream, increases the interprovincial migration propensities of minority ethnic groups.*

In light of the fact that Quebec has been the French homeland in Canada and the fact that the rest of Canada has been dominated by the British ethnic group and the English language, the first hypothesis is undoubtedly true for the French ethnic group residing in Quebec. But, the members of the French ethnic group residing in the rest of Canada, especially those who were born in Quebec, may have difficulty in developing careers in their resident province and be subject to the drawing power of the French milieu of Quebec. This may be especially true for those who continue to use the French language in their daily life. Therefore, it is hypothesized that *among those residing outside Quebec, the propensities to make interprovincial migration are greater for the French ethnic group than for the mainstream ethnic group*, and that *this difference is*

greater for the French ethnic group that continues to use French as the home language than for the French ethnic group that has shifted the home language to English.

3.4 Model Specification and Methods of Assessment

The model for the multivariate analysis to be performed here is the following binomial logit model:

$$P[i] = \frac{\exp(d + c' x[i])}{1 + \exp(d + c' x[i])} \quad (1)$$

where $P[i]$ is the probability that person i will make interprovincial migration; $x[i]$ is a column-vector of observable explanatory variables; c' is a row-vector of unknown coefficients; and d is an unknown constant.

This model is applied separately to the 1981, 1986, and 2001 census data to explain the propensities of making interprovincial migration in 1976-81, 1981-86, and 1996-2001, respectively. For each of these time intervals, the sample includes all the individuals who resided in Canada at the beginning of the time interval and were aged at 20 or older at the census date. The geographical system used to define interprovincial migration consists of ten distinct provinces, with Yukon and Northwest Territories being merged into the province of Prince Edward Island for the 1976-81 and 1981-86 periods. This geographically nonsensical merger is due to the fact that the 1981 PUMF uses the same code to represent these political units of very small populations. For this technical reason, this merged unit is considered as a province for the 1976-81 and 1981-86 periods.

Since it is possible for this research to access the full long-form records of the 2001 census, 13 distinct geographic units (the 10 provinces plus the three territories) are used to define interprovincial migration for the 1996-2001period. Note that for simplicity, the three territories are considered as three provinces.

The unknown coefficients are estimated by the maximum likelihood method, using the Newton-Raphson algorithm. Based on the likelihood criterion, the relative importance between two explanatory variables can be judged by the magnitudes of their associated t-ratios. Since our sample size is very large, the t-ratios can be considered as having the standard normal distribution under the null hypothesis, so that a value of at least 2.0 in magnitude can be taken as evidence of a statistically significant relationship.

With respect to the explanatory factors, the specifications of Ethnicity, Home Language, and Educational Attainment are the same as those used by Trovato and Halli (1990). Note that in order to avoid ambiguity, the individuals belonging to the "Other" ethnic group have been removed from the sample for the 1996-2001 migration period. Instead of using only two age groups, age is broken down into 11 five-year age groups and an open-ended age group (20-24, 25-29, . . . , 70-74, and 75+), with the 20-24 age group serving as the reference category.

Three additional explanatory factors are introduced. First, in recognition of the possibility that the changing spatial economy and some persistent attributes of the provinces (e.g. Alberta's sharp economic fluctuations and the continuing French domination of Quebec) may have systematic effects on the migration propensities of

different ethnic groups who are distributed differently among the provinces, we use a dummy variable to represent each of the provinces, using Ontario as the reference category.[3] Second, to accommodate the possibility that relatively recent immigrants may be more footloose, a dummy variable is used to represent immigrants whose time of immigration was between 5 and 10 years before the census date. Third, based on the extensive research findings about the effects of previous migration experience and place of birth on current migration propensities (e.g. Morrison and Da Vanzo, 1986; Liaw, 1990; Newbold and Liaw, 1994; Kawabe and Liaw, 1994; Lin, Liaw, and Tsay, 1999), a factor representing Previous Migration Experience is also introduced. Using "native" (i.e. the province of birth was the same as the province of residence 5 years before the census date) as the reference category, this factor is represented by two dummy variables: (1) "non-native" (i.e. the province of birth was different from the province of residence 5 years before the census date), and (2) "foreign-born" (i.e. the place of birth was not in Canada).

Interaction terms are used not only for studying the effects of the acculturation towards the English language but also for reflecting three sets of well known features of interprovincial migration in Canada. First, the French/non-French contrast between Quebec and the rest of Canada makes the French residents in Quebec less prone to out-

[3] For 1976-81 and 1981-86, one dummy variable "Atlantic" is used to represent to four Atlantic provinces, because the sample size of PUMF is much smaller than the number of the full "long-form" records. In each of the 1981, 1986, and 2001 censuses, about 20% of the households received the "long-form" questionnaire.

migrating and the French residents in the rest of Canada more prone to making interprovincial migration (mainly towards Quebec) (Newbold, 1996; Liaw and Qi, 2004). This contrast also tends to make non-French ethnic groups in Quebec more prone to moving to the rest of Canada. Second, the existence of large immigrant communities in Ontario and British Columbia tends to make these two provinces particularly attractive to the foreign-born so that the foreign-born residents in these two provinces tend to have relatively low propensity to move out (Liaw and Xu, 2005). Third, with a large pool of non-natives and a highly volatile provincial economy, Alberta's ability in retaining non-natives tends to vacillate with the ups and downs of its economy (Newbold and Liaw, 1994).

The goodness of fit of a given specification of the model is to be measured by:

$$\text{Rho-square} = 1 - L_g/L_o \qquad (2)$$

where L_g is the maximum log of likelihood of the given specification, and L_o is the maximum log of likelihood of the corresponding null model (i.e. the model with c' set at zero). It is important to note that the ceiling of Rho-square is much less than 1.0, so that a value of 0.2 may indicate a very good fit (McFadden, 1974).

The *best specification* of the model is defined as the specification that contains all explanatory variables whose estimated coefficients are theoretically sensible and are statistically significant in at least one of the three migration periods. To help evaluate the relative importance of various subsets of explanatory variables (say, the dummy variables representing age) against another subset (say, the dummy variables representing

educational attainment), the subsets of variables are deleted in turn from the best specification and then the resulting decreases in Rho-square are compared: the greater the decrease, the more important the deleted subset of variables. For each deleted subset of variables, the magnitude of the corresponding decrease in Rho-square is called the *marginal contribution in Rho-square* (MCR for short).

The conventional method used to find the marginal contribution in Rho-square of a subset of explanatory variables deleted from the best specification of the model allows the estimated values of the coefficients of the remaining explanatory variables to change so that the likelihood of the reduced specification of the model is maximized (Liaw, 1996). When the explanatory power of the deleted subset of variables overlaps to a large extent with the explanatory power of some remaining variables, this method will yield a relative small marginal contribution in Rho-square and hence seriously understate its importance. Since serious overlap in explanatory power between theoretically meaningful subsets of explanatory variables occurs frequently in empirical research, Ishikawa and Liaw (2006) introduced an alternative method that can prevent such understatement of the marginal contribution in Rho-square from occurring. In this alternative method, to compute the log likelihood of the reduced specification of the model, the estimated values of the coefficients of the remaining explanatory variables are forced to remain the same as those in the best specification, while allowing the constant term d in the model to change its value so that the predicted overall interprovincial migration rate is always guaranteed to be equal to the observed overall interprovincial migration rate by the

Newton-Raphson algorithm. In other words, this alternative method does not allow part of the explanatory power of the deleted subset of variables to be taken over by any of the remaining explanatory variables. This alternative method is called the *fixed-coefficient method*, whereas the conventional method is called the *maximizing method.*

3.5 Multivariate Findings

To apply the logit model, a sample of persons aged 20 and over is taken from the PUMF of the 1981 census, the PUMF of the 1986 census, and the full set of long-form records of the 2001 census, respectively. The age restriction is the same as the one used in Trovato and Halli's second study. The sizes of the three samples are: 316,255 persons, 345,172 persons, and 2,233,309 persons, respectively. Somehow the size of our sample from the 1981 census is substantially larger than that of Trovato and Halli (277,682 persons). Perhaps they imposed an additional restriction that was not explicitly stated in their paper.

The best specification of the logit model for each of the 1976-81, 1981-81, and 1996-2001 periods explains quite well the variations in the propensities to make interprovincial migration (Tables 3.3, 3.4, and 3.5). The Rho-square values are 0.1678, 0.1818, and 0.2372. The explanatory power appears to increase through time.

For the non-French minority ethnic groups that did not use English as home language, the estimated coefficients of the best specifications for the three periods are mostly supportive of the first hypothesis that *the propensities to make interprovincial*

migration are lower for minority ethnic groups than for the mainstream ethnic group. In 1976-81, the support for the hypothesis is unanimous, because the estimated coefficients are -1.67 for Italians, -0.60 for Jews, -0.56 for Ukrainians, -0.32 for Germans, and -0.30 for the "Other" ethnic group, with all associated t-ratios being greater than 2.0. In 1981-86, the support for the hypothesis is also unanimous, because the estimated coefficients are -1.46 for Italians, -0.45 for Jews, -0.26 for Ukrainians, -0.70 for Germans, and -0.40 for the "Other" ethnic group, although the coefficient for Ukrainians was not statistically significant. In 1996-2001, the support for the hypothesis still remains unanimous, because the estimated coefficients are -1.43 for Italians, -0.28 for Jews, -0.41 for Ukrainians, and -1.03 for Germans, although the coefficient for Jews was not statistically significant. It is worth noting that in the best specifications of all three periods, there is not a single statistically significant evidence against this hypothesis.

Of particular interest is that among the non-French minority ethnic groups, the Italians have had by far the lowest propensity to make interprovincial migration. The underlying reasons for this finding may be that the Italians have not only relatively complete institutions (Breton, 1971) but also strong ethnic economic niches. In the next chapter, the existence and strength of ethnic economic niches will be assessed.

With respective to the effects of language acculturation for the non-French minority ethnic groups, the estimated coefficients of the best specifications for the three migration periods are also mostly supportive of the second hypothesis that *the use of English as home language increases the interprovincial migration propensities of*

minority ethnic groups. In 1976-81, the estimated coefficient of the interaction between English language and an ethnic group is 0.74 for Italians, 0.46 for Ukrainians, 0.25 for Germans, 0.31 for the "Other" ethnic group, and near zero and non-significant for Jews. In 1981-86, it is 0.49 for Italians, 0.54 for Germans, 0.27 for the "Other" ethnic group, and near zero and non-significant for both Ukrainians and Jews. In 1996-2001, it is 0.42 for Italians, 0.26 for Ukrainians, 0.86 for Germans, and -0.25 for Jews. Although the coefficient for the interaction of English language and the Jewish ethnic group turns out to have a "wrong" sign, the very small magnitude of its associated t-ratio (-1.2) indicates that the effect is statistically non-significant. It is worth noting again that for the non-French minority ethnic groups, there is not a single statistically significant evidence against the hypothesis about the migration-enhancing effects of the acculturation into the English language.

Of particular interest is that the Jewish ethnic group does not provide any statistically significant support for this hypothesis. In general, the Jews with both English and "Other" home languages tend to maintain relatively low propensities to make interprovincial migration, especially in 1976-81 and 1981-86. This finding may be considered as a reflection of the fact that the Jewish people in Canada have succeeded in building what Logan, Alba, and Zhang (2002) call "ethnic communities", in contrast to "minority ghettos". The former consist of "ethnic neighborhoods that are selected as living environments by those who have wider options based on their market resources"(p.300), whereas the latter result mainly from the exclusion by the mainstream

society and tend to ensnare the members of an ethnic group with little human capital and resources. Such ethnic communities are most likely to be built through "selective acculturation", which means that the younger generation's shift towards the mainstream culture is accompanied by substantial retention of the ethnic group's cherished cultural norms (Portes and Rumbaut, 2001, p.54). The selective acculturation helps not only the second generation's high academic achievement but also the establishment and maintenance of strong ethnic economic niches. To the extent that there are many good economic and career opportunities in the Jewish communities, the Jews with both English and their native home languages have the luxury of forsaking interprovincial migration as a means to improve their circumstances.

Next, let's consider the more complicated case of the French ethnic group. Since there are as many as six estimated coefficients in the best specification of the logit model that are relevant to the hypotheses about this ethnic group, these estimated coefficients are summed up properly for each of the following six groups of individuals:

(1) English-speaking British residing in Quebec,

(2) French-speaking French residing in Quebec,

(3) English-speaking French residing in Quebec,

(4) English-speaking British residing in the rest of Canada,

(5) French-speaking French residing in the rest of Canada,

(6) English-speaking French residing in the rest of Canada.

The six sums of the estimated coefficients are then used to compute two sets of odds ratios. The first set uses the English-speaking British residing in Quebec as the reference group, whereas the second set uses the English-speaking British residing in the rest of Canada as the reference group (see Table 3.6). It turns out that these odds ratios are mostly supportive of the hypothesis that *among those residing outside Quebec, the propensities to make interprovincial migration are greater for the French ethnic group than for the mainstream ethnic group*, and the hypothesis that *this difference is greater for the French ethnic group that continues to use French as the home language than for the French ethnic group that has shifted home language to English.* Among those residing outside Quebec, the second set of odds ratios for the French-speaking French are all greater than 1.0 in all three migration periods (1.09 in 1976-81, 1.60 in 1981-86, and 1.86 in 1996-2001). Among the French people residing outside Quebec, the transition of home language from French to English clearly results in a decrease in odds ratio: from 1.09 to 1.06 in 1976-81, from 1.60 to 1.02 in 1981-86, and from 1.86 to 0.97 in 1996-2001.

For the researchers who are concerned with the spatial polarization between the French and British ethnic groups, the sharp upward trend in the odds ratio of the French-speaking French outside Quebec is an ominous sign, because it suggests that the previous French out-migrants from Quebec who have not switched their home language to English are increasingly likely to return to Quebec. Fortunately, in Quebec, this ominous trend is countered by the decrease in the huge gap between the extremely high out-migration rate

of the English-speaking British and the extremely low out-migration rate of the French-speaking French. In Quebec, relative to the English-speaking British, the odds ratio for the French-speaking French increases from 0.05 in 1976-81 to 0.08 in 1981-86 and 0.10 in 1996-2006 (Table 3.6).

With respect to the effects of the contextual explanatory factors, the estimated coefficients of the best specification of the logit model for all three migration periods (Tables 3.3 to 3.5) turn out to be theoretically sensible and mostly consistent with the main findings in the literature. First, there has been a clear age pattern: the propensity to make interprovincial migration is very high in the early 20s and reaches a maximum in the late 20s. It then decreases monotonically towards older ages with no sign of a retirement peak in the 60s. Second, the higher the educational attainment, the greater the propensity to make interprovincial migration. Third, the recency of immigration has positive effect on the interprovincial migration propensity in 1976-81 and 1981-86 but does not have a statistically significant effect in 1996-2001. Fourth, with respect to spatial pattern, the coefficients of the provincial dummy variables show that Quebec has had the lowest out-migration rate among all provinces, that other province with relatively weak economies have had relatively high out-migration rates, and that the out-migration rates of Alberta and British Columbia have fluctuated substantially. Finally, with respect to the effects of previous migration experience and place of birth, the estimated coefficients reveal that the propensities to make interprovincial migration are by far the highest for non-natives and the lowest for natives, and that Ontario indeed has a strong

retention power on the foreign-born. British Columbia's retention power on the foreign-born is found for 1976-81 and 1981-86 but was reversed into a repulsive power in 1996-2001 when its economy suffered a serious setback (see the temporal pattern of provincial employment growth rates in Table 4.5). Another evidence of the effects of economic fluctuations is that the retention power of Alberta on non-natives was turned into a repulsive power in 1981-86 when its employment growth rate was reduced to zero.

The coefficients estimated by the maximizing method after the deletions of different subsets of explanatory variables are also shown in Tables 3.3 to 3.5. They provide detailed views about the overlaps in explanatory powers among different subsets explanatory variables. For example, the coefficient of the dummy variable Ukrainian becomes much more negative as a consequence of the deletion of the age factor from the best specification. This change reflects the fact that the Ukrainian population is relatively old, and that older adults are in general less migratory than younger adults. It implies that the control for the effects of age is important for a proper assessment of the effect of ethnicity. If age is not control, the negative effect of being Ukrainians will be seriously overstated. It is clearly scientifically unsound to avoid including substantively meaningful explanatory variables that have overlapping explanatory powers. It is more reasonable to keep in mind that when such overlaps occur, the fixed-coefficient method is better for assessing the relative importance of different subsets of explanatory variables.

Based on the fixed-coefficient method, the marginal contributions in Rho-square show that ethnic selectivity has been more important than educational selectivity, and that

the importance of language acculturation became substantially more important in 1996-2001. A closer examination of the estimation results reveals that the increasing importance of language acculturation was mainly due to the increasing gap between the coefficients of "French * Non-Quebec" and "(French * English) * Non-Quebec". It is 0.09 versus -0.03 in 1976-81, 0.47 versus -0.45 in 1981-86, and 0.62 versus -0.65 in 1996-2001. In other words, the increase is mainly due to increasing difference in interprovincial migration propensity between the French-speaking and English-speaking French residents outside Quebec.

The marginal contributions in Rho-square generated by the fixed-coefficient method also show that the explanatory power of nativity status has always been very great and become by far the greatest in 1996-2001. This finding indicates that migration is a highly path-dependent process, and that the information on the place of birth is of crucial importance in migration studies.

Table 3.3 Estimation Result of T&H's Model + Provincial Dummy Variables + Age Groups + Experience Effect for the 1976-1981 Period.

Explanatory Variable	Best Specification		-Ethnicity Related		-Eth*Lan Effect		-Age		-Education		-Geo Related&Lan Effect		-Experience Effect	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	-2.91	-105.1	-2.95	-110.9	-2.91	-105.0	-3.74	-164.4	-2.74	-111.8	-2.59	-109.5	-2.71	-103.7
1.Age (Ref: Aged 20-24)														
Ref: Aged 20-24	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Aged 25-29	0.03	1.3	0.04	1.4	0.03	1.3	----	----	0.08	3.1	0.01	0.5	0.11	4.7
Aged 30-34	-0.38	-13.8	-0.37	-13.6	-0.38	-13.8	----	----	-0.32	-11.9	-0.39	-14.6	-0.22	-8.2
Aged 35-39	-0.68	-21.7	-0.67	-21.3	-0.68	-21.7	----	----	-0.63	-20.4	-0.69	-22.3	-0.46	-15.2
Aged 40-44	-0.96	-26.3	-0.95	-26.1	-0.96	-26.4	----	----	-0.94	-26.0	-0.96	-26.8	-0.72	-20.4
Aged 45-49	-1.27	-30.5	-1.27	-30.4	-1.28	-30.6	----	----	-1.27	-30.7	-1.27	-30.8	-1.04	-25.4
Aged 50-54	-1.47	-32.6	-1.46	-32.4	-1.47	-32.7	----	----	-1.48	-33.1	-1.46	-32.9	-1.22	-27.6
Aged 55-59	-1.72	-34.1	-1.71	-34.0	-1.73	-34.2	----	----	-1.76	-35.0	-1.71	-34.2	-1.46	-29.4
Aged 60-64	-1.72	-31.6	-1.70	-31.5	-1.72	-31.8	----	----	-1.76	-32.7	-1.69	-31.4	-1.46	-27.4
Aged 65-69	-1.74	-29.2	-1.73	-29.2	-1.74	-29.4	----	----	-1.80	-30.6	-1.71	-29.1	-1.49	-25.5
Aged 70-74	-1.85	-25.6	-1.84	-25.4	-1.87	-25.8	----	----	-1.94	-27.0	-1.80	-25.0	-1.61	-22.5
Aged 75_	-2.06	-28.8	-2.04	-28.6	-2.08	-29.0	----	----	-2.17	-30.5	-1.95	-27.5	-1.79	-25.4
2.Education (Ref: Primary)														
Ref: Primary	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Secondary	0.12	5.1	0.13	5.6	0.13	5.5	0.55	23.6	----	----	0.08	3.4	0.14	5.9
Post-Secondary	0.43	22.0	0.44	22.7	0.43	22.5	0.71	38.1	----	----	0.42	22.0	0.47	25.0
Ethnic Effect														
3.Ethnicity (Ref: British)														
Ref: British	----	----	----	----	----	----	----	----	----	----	----	----	----	----
French * Quebec	-0.60	-4.3	----	----	-0.30	-4.4	-0.66	-4.8	-0.63	-4.6	-1.30	-39.5	-0.87	-6.3
French * Non-Quebec	0.09	1.9	----	----	0.07	2.3	0.11	2.4	0.06	1.2			0.19	4.2
German	-0.32	-2.4	----	----	-0.08	-2.3	-0.46	-3.5	-0.36	-2.8	-0.44	-3.4	-0.40	-3.1
Italian	-1.67	-10.6	----	----	-1.12	-14.0	-1.45	-9.2	-1.78	-11.3	-1.97	-13.0	-1.79	-11.5
Jewish	-0.60	-7.5	----	----	-0.60	-7.4	-0.61	-7.7	-0.54	-6.7	-0.21	-2.7	-0.77	-9.6
Ukrainian	-0.56	-3.1	----	----	-0.14	-2.8	-0.97	-5.5	-0.59	-3.3	-0.52	-2.9	-0.65	-3.7
Other	-0.30	-5.4	----	----	-0.02	-1.0	-0.24	-4.3	-0.35	-6.3	-0.56	-11.0	-0.42	-7.8
Assimilation Effect														
4.Ethnicity * Language (*Quebec)														
(French * English) * Quebec	0.36	2.3	----	----	----	----	0.51	3.2	0.37	2.3	1.46	32.4	0.41	2.6
(French * English) * Non-Quebec	-0.03	-0.5	----	----	----	----	0.07	1.3	-0.03	-0.5			0.02	0.4
German * English	0.25	1.8	----	----	----	----	0.48	3.6	0.30	2.2	0.37	2.8	0.31	2.3
Italian * English	0.74	4.1	----	----	----	----	0.92	5.1	0.84	4.7	1.06	6.1	0.75	4.2
Jewish * English (Insignificant)	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ukrainian * English	0.46	2.5	----	----	----	----	0.91	4.9	0.48	2.6	0.47	2.5	0.53	2.9
Other* English	0.31	5.3	----	----	----	----	0.42	7.4	0.37	6.4	0.55	10.8	0.41	7.4

Table 3.3 Estimation Result of T&H's Model + Provincial Dummy Variables + Age Groups + Experience Effect for the 1976-1981 Period (continued).

Explanatory Variable	Best Specification		-Ethnicity Related		-Eth*Lan Effect		-Age		-Education		-Geo Related&Lan Effect		-Experience Effect	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
5.Language * Quebec														
English * Quebec	2.47	18.2	2.94	59.4	2.77	38.7	2.27	16.8	2.44	18.0	----	----	2.68	19.8
Other* Quebec	1.20	7.7	1.19	11.9	1.21	10.4	1.19	7.6	1.15	7.4	----	----	1.66	10.6
6.Time of assimilation														
Ref: immigrated before 1971	----	----	----	----	----	----	----	----	----	----	----	----	----	----
immigrated during 1971-1975	0.13	2.5	0.18	3.7	0.09	1.8	0.61	12.7	0.14	2.8	0.12	2.4	0.17	3.8
Geographic Effect														
7.Province (Ref: Ontario)														
Ref: Ontario	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Atlantic	0.67	24.3	0.70	25.4	0.67	24.3	0.72	26.8	0.67	24.3	----	----	0.66	25.1
Quebec	-1.03	-7.7	-1.57	-34.7	-1.31	-17.1	-0.91	-6.8	-0.99	-7.4	----	----	-1.01	-7.5
Manitoba	0.80	22.9	0.78	22.6	0.79	22.6	0.80	23.3	0.78	22.4	----	----	0.94	28.5
Saskatchwen	0.72	18.9	0.72	19.0	0.72	18.9	0.68	18.2	0.70	18.4	----	----	0.75	20.4
Alberta	0.21	5.2	0.20	5.0	0.21	5.0	0.26	6.3	0.21	5.2	----	----	0.62	22.2
British Columbia	-0.24	-7.3	-0.24	-7.5	-0.24	-7.2	-0.25	-7.7	-0.25	-7.8	----	----	0.22	7.9
8.Experience Effect														
Non-Native	1.54	72.9	1.56	73.9	1.54	72.9	1.34	65.3	1.56	73.9	1.50	79.3	----	----
Foreign-Born	0.85	23.0	0.79	21.8	0.84	22.7	0.34	9.7	0.89	24.1	0.51	18.1	----	----
Foreign-Born * Ontario	-0.64	-12.5	-0.77	-15.1	-0.68	-13.3	-0.56	-11.1	-0.65	-12.7	----	----	----	----
Foreign-Born * B.C.	-0.24	-3.3	-0.27	-3.7	-0.27	-3.7	-0.20	-2.8	-0.23	-3.1	----	----	----	----
Non-Native * Alberta	-0.02	-0.3	-0.01	-0.2	-0.01	-0.1	0.06	1.2	-0.02	-0.5	----	----	----	----
Maximum Rho-square	0.1678		0.1648		0.1674		0.1251		0.1639		0.1303		0.1227	
Marginal Contribution in Rho-square	------		0.0030		0.0004		0.0427		0.0039		0.0375		0.0452	
Fixed Rho-square			0.1628		0.1652		0.1179		0.1637		0.1101		0.1172	
Marginal Contribution in Rho-square	------		0.0050		0.0026		0.0499		0.0041		0.0577		0.0506	

Note: To be reserved in this model, the estimate coefficient of a variable should be significant in the "Best Model" for at least one census. The interaction term of Jewish and English home language is deleted from the model because neither of its regression result is significant for 1981 and 1986 censuses.

Table 3.4 Estimation Result of T&H's Model + Provincial Dummy Variables + Age Groups + Experience Effect for the 1981-1986 Period

Explanatory	Best Specification		-Ethnicity Related		-Eth*Lan Effect		-Age		-Education		-Geo Related&Lan Effect		-Experience Effect	
Variable	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	-3.74	-111.6	-3.76	-115.0	-3.73	-111.7	-4.45	-160.4	-3.54	-118.2	-3.20	-115.7	-3.44	-111.1
1.Age (Ref: Aged 20-24)														
Ref: Aged 20-24	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Aged 25-29	0.08	2.7	0.08	2.8	0.08	2.7	----	----	0.11	3.9	0.07	2.5	0.18	6.5
Aged 30-34	-0.26	-8.4	-0.25	-8.3	-0.25	-8.4	----	----	-0.21	-6.9	-0.26	-8.6	-0.08	-2.7
Aged 35-39	-0.57	-17.2	-0.56	-17.0	-0.57	-17.2	----	----	-0.52	-15.8	-0.59	-18.1	-0.35	-10.8
Aged 40-44	-0.85	-22.1	-0.83	-21.7	-0.84	-22.0	----	----	-0.81	-21.3	-0.88	-23.2	-0.58	-15.6
Aged 45-49	-1.12	-24.7	-1.13	-24.8	-1.13	-24.8	----	----	-1.11	-24.6	-1.18	-26.1	-0.85	-19.2
Aged 50-54	-1.40	-26.7	-1.40	-26.8	-1.40	-26.7	----	----	-1.41	-27.2	-1.45	-27.9	-1.11	-21.7
Aged 55-59	-1.45	-26.6	-1.45	-26.6	-1.45	-26.6	----	----	-1.49	-27.5	-1.51	-27.9	-1.15	-21.5
Aged 60-64	-1.54	-26.7	-1.53	-26.6	-1.54	-26.7	----	----	-1.59	-27.8	-1.58	-27.7	-1.24	-21.9
Aged 65-69	-1.58	-25.0	-1.57	-24.9	-1.58	-25.0	----	----	-1.65	-26.3	-1.63	-25.9	-1.29	-20.6
Aged 70-74	-1.62	-22.3	-1.62	-22.2	-1.62	-22.3	----	----	-1.71	-23.5	-1.67	-23.0	-1.35	-18.8
Aged 75_	-1.96	-25.6	-1.93	-25.2	-1.95	-25.5	----	----	-2.07	-27.2	-1.91	-25.1	-1.65	-21.9
2.Education (Ref: Primary)														
Ref: Primary	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Secondary	0.13	5.0	0.14	5.3	0.14	5.2	0.49	19.6	----	----	0.08	1.7	0.15	5.9
Post-Secondary	0.43	20.4	0.44	20.7	0.44	20.7	0.68	33.5	----	----	0.41	4.4	0.49	23.5
Ethnic Effect														
3.Ethnicity (Ref: British)														
Ref: British	----	----	----	----	----	----	----	----	----	----	----	----	----	----
French * Quebec	-0.58	-5.1	----	----	-0.22	-2.8	-0.65	-5.6	-0.60	-5.2	-0.81	-25.5	-0.93	-8.2
French * Non-Quebec	0.47	10.7	----	----	0.23	7.1	0.45	10.5	0.44	10.0			0.58	13.5
German	-0.70	-4.5	----	----	-0.19	-4.3	-0.91	-5.9	-0.75	-4.8	-0.69	-4.5	-0.83	-5.4
Italian	-1.46	-8.2	----	----	-1.10	-11.4	-1.39	-7.9	-1.56	-8.8	-1.86	-10.9	-1.69	-9.7
Jewish	-0.45	-4.7	----	----	-0.45	-4.7	-0.55	-5.9	-0.39	-4.1	-0.24	-2.6	-0.59	-6.2
Ukrainian	-0.26	-1.4	----	----	-0.29	-4.4	-0.76	-4.0	-0.28	-1.5	-0.25	-1.3	-0.45	-2.4
Other	-0.40	-7.1	----	----	-0.17	-6.0	-0.34	-6.1	-0.45	-8.1	-0.56	-10.8	-0.55	-10.5
Assimilation Effect														
4.Ethnicity * Language (*Quebec)														
(French * English) * Quebec	0.57	3.8	----	----	----	----	0.71	4.8	0.57	3.8	0.93	19.2	0.61	4.2
(French * English) * Non-Quebec	-0.45	-7.5	----	----	----	----	-0.35	-5.9	-0.45	-7.4			-0.43	-7.4
German * English	0.54	3.4	----	----	----	----	0.71	4.5	0.60	3.7	0.64	4.0	0.59	3.7
Italian * English	0.49	2.3	----	----	----	----	0.73	3.5	0.60	2.9	0.92	4.5	0.51	2.5
Jewish * English (Insignificant)	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ukrainian * English	-0.04	-0.2	----	----	----	----	0.34	1.7	-0.02	-0.1	0.04	0.2	0.00	0.0
Other* English	0.27	4.6	----	----	----	----	0.29	5.0	0.63	4.4	0.46	8.4	0.32	5.7

Table 3.4 Estimation Result of T&H's Model + Provincial Dummy Variables + Age Groups + Experience Effect for the 1981-1986 Period (continued).

Explanatory Variable	Best Specification		-Ethnicity Related		-Eth*Lan Effect		-Age		-Education		-Geo Related&Lan Effect		-Experience Effect	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
5.Language * Quebec														
English * Quebec	1.95	17.3	2.41	46.5	2.32	29.2	1.83	16.3	1.95	17.3	----	----	2.18	19.7
Other* Quebec	0.65	4.6	0.69	6.8	0.78	6.4	0.64	4.5	0.85	6.1	----	----	1.20	8.6
6.Time of assimilation														
Ref: immigrated before 1976	----	----	----	----	----	----	----	----	----	----	----	----	----	----
immigrated during 1976-1981	0.31	5.3	0.30	5.2	0.26	4.5	0.71	12.0	0.31	5.2	0.37	6.3	0.39	7.0
Geographic Effect														
7.Province (Ref: Ontario)														
Ref: Ontario	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Atlantic	0.99	31.2	1.04	32.9	1.00	31.5	1.04	33.3	0.98	31.0	----	----	0.98	32.6
Quebec	-0.33	-3.0	-0.85	-18.6	-0.67	-8.0	-0.26	-2.4	-0.31	-2.9	----	----	-0.34	-3.2
Manitoba	0.89	21.1	0.84	19.9	0.87	20.6	0.93	22.3	0.88	20.7	----	----	1.08	27.1
Saskatchwen	1.03	24.0	0.98	23.2	1.02	23.7	1.07	25.2	1.02	23.7	----	----	1.11	27.2
Alberta	0.84	19.9	0.79	18.8	0.82	19.4	0.92	21.8	0.84	19.9	----	----	1.47	54.4
British Columbia	0.36	10.8	0.33	9.8	0.35	10.5	0.35	10.4	0.35	10.5	----	----	0.87	29.6
8.Experience Effect														
Non-Native	1.78	75.8	1.81	77.2	1.78	75.8	1.61	69.6	1.80	76.8	1.91	94.8	----	----
Foreign-Born	1.06	26.5	0.96	24.8	1.04	26.1	0.64	16.5	1.10	27.7	0.70	22.0	----	----
Foreign-Born * Ontario	-0.77	-12.2	-0.89	-14.3	-0.80	-12.8	-0.70	-11.3	-0.78	-12.4	----	----	----	----
Foreign-Born * B.C.	-0.35	-4.8	-0.37	-5.1	-0.37	-5.1	-0.30	-4.2	-0.34	-4.7	----	----	----	----
Non-Native * Alberta	0.10	2.1	0.12	2.4	0.11	2.3	0.20	4.3	0.09	1.8	----	----	----	----
Maximum Rho-square	0.1818		0.1784		0.1810		0.1468		0.1780		0.1436		0.1196	
Marginal Contribution in Rho-square	------		0.0034		0.0009		0.0350		0.0038		0.0382		0.0622	
Fixed-coefficient Rho-square	0.1818		0.1762		0.1785		0.1422		0.1778		0.1233		0.1095	
Marginal Contribution in Rho-square	------		0.0056		0.0033		0.0396		0.0040		0.0585		0.0723	

Note: To be reserved in this model, the estimate coefficient of a variable should be significant in the "Best Model" for at least one census. The interaction term of Jewish and English home language is deleted from the model because neither of its regression result is significant for 1981 and 1986 censuses.

Table 3.5 Estimation Result of T&H's Model + Provincial Dummy Variables + Age Groups + Experience Effect for the 1996-2001 Period.

Explanatory Variable	Best Specification		-Ethnicity Related		-Eth*Lan Effect		-Age		-Education		-Geo Related&Lan Effect		-Experience Effect	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	-4.02	-250.6	-4.08	-257.8	-4.02	-250.8	-5.12	-397.3	-3.84	-284.8	-3.44	-247.7	-3.35	-233.8
1.Age (Ref: Aged 20-24)														
Ref: Aged 20-24	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Aged 25-29	0.16	11.9	0.16	11.4	0.16	11.8	----	----	0.23	16.7	0.13	9.6	0.27	21.4
Aged 30-34	-0.27	-18.9	-0.28	-19.7	-0.27	-19.0	----	----	-0.20	-14.2	-0.33	-23.8	-0.08	-6.0
Aged 35-39	-0.69	-47.6	-0.69	-48.1	-0.69	-47.6	----	----	-0.63	-43.9	-0.76	-53.9	-0.45	-33.5
Aged 40-44	-1.01	-66.6	-1.01	-67.0	-1.00	-66.5	----	----	-0.95	-63.7	-1.09	-73.5	-0.75	-52.6
Aged 45-49	-1.29	-79.3	-1.29	-79.5	-1.29	-79.1	----	----	-1.23	-76.7	-1.37	-85.8	-1.00	-65.1
Aged 50-54	-1.46	-84.3	-1.46	-84.3	-1.46	-84.1	----	----	-1.41	-82.3	-1.54	-90.4	-1.15	-69.7
Aged 55-59	-1.58	-80.4	-1.57	-80.2	-1.57	-80.2	----	----	-1.54	-79.5	-1.66	-85.7	-1.22	-65.3
Aged 60-64	-1.70	-75.1	-1.71	-75.4	-1.70	-74.9	----	----	-1.70	-75.5	-1.79	-79.7	-1.34	-61.3
Aged 65-69	-1.77	-71.7	-1.78	-72.0	-1.77	-71.4	----	----	-1.79	-73.1	-1.86	-76.1	-1.40	-58.5
Aged 70-74	-2.03	-70.8	-2.03	-71.0	-2.02	-70.6	----	----	-2.07	-72.7	-2.12	-74.7	-1.65	-59.1
Aged 75_	-2.07	-87.7	-2.06	-87.5	-2.06	-87.4	----	----	-2.13	-91.4	-2.13	-91.2	-1.67	-72.9
2.Education (Ref: Primary)														
Ref: Primary	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Secondary	0.10	8.4	0.12	9.9	0.10	8.6	0.51	44.7	----	----	0.07	5.6	0.16	14.1
Post-Secondary	0.36	35.0	0.37	36.9	0.36	35.4	0.68	69.7	----	----	0.34	34.4	0.49	50.6
Ethnic Effect														
3.Ethnicity (Ref: British)														
Ref: British	----	----	----	----	----	----	----	----	----	----	----	----	----	----
French * Quebec	0.21	3.0	----	----	0.03	1.1	0.05	0.8	0.20	2.8	-0.74	-39.0	0.14	2.0
French * Non-Quebec	0.62	21.9	----	----	0.06	5.1	0.49	17.8	0.59	21.1			0.46	17.0
German	-1.03	-8.9	----	----	-0.19	-11.2	-0.91	-7.9	-1.21	-10.5	-0.92	-8.0	-1.21	-10.6
Italian	-1.43	-10.5	----	----	-1.03	-32.5	-1.69	-12.2	-1.55	-11.5	-2.01	-16.4	-1.49	-11.1
Jewish	-0.28	-1.4	----	----	-0.51	-12.2	-0.46	-2.4	-0.28	-1.5	-0.92	-5.0	-0.19	-1.0
Ukrainian	-0.41	-2.2	----	----	-0.15	-5.9	-0.73	-4.1	-0.42	-2.3	-0.67	-3.7	-0.44	-2.4
Assimilation Effect														
4.Ethnicity * Language (*Quebec)														
(French * English) * Quebec	-0.22	-2.9	----	----	----	----	0.05	0.6	-0.20	-2.7	0.8	38.4	-0.25	-3.4
(French * English) * Non-Quebec	-0.65	-21.3	----	----	----	----	-0.45	-15.4	-0.64	-21.2			-0.39	-13.6
German * English	0.86	7.4	----	----	----	----	0.66	5.7	1.00	8.6	0.80	7.0	0.93	8.1
Italian * English	0.42	3.1	----	----	----	----	0.87	6.2	0.53	3.8	1.00	7.9	0.01	0.1
Jewish * English	-0.25	-1.2	----	----	----	----	-0.12	-0.6	-0.20	-1.0	0.46	2.4	-0.40	-2.0
Ukrainian * English	0.26	1.4	----	----	----	----	0.33	1.8	0.27	1.5	0.57	3.2	0.24	1.3

Table 3.5 Estimation Result of T&H's Model + Provincial Dummy Variables + Age Groups + Experience Effect for the 1996-2001 Period (continued).

Explanatory	Best Specification		-Ethnicity Related		-Eth*Lan Effect		-Age		-Education		-Geo Related&Lan Effect		-Experience Effect	
Variable	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
5.Language * Quebec														
English * Quebec	2.47	36.6	2.18	77.8	2.31	73.6	2.30	34.3	2.45	36.4	----	----	3.23	48.8
Other* Quebec	1.32	7.9	0.34	2.4	1.00	6.9	1.40	8.3	1.24	7.5	----	----	2.04	12.4
6.Time of assimilation														
Ref: immigrated before 1991	----	----	----	----	----	----	----	----	----	----	----	----	----	----
immigrated during 1991-1995	-0.02	-0.6	0.04	0.9	-0.02	-0.5	0.55	12.5	-0.02	-0.4	0.00	-0.1	0.10	2.5
Geographic Effect														
7.Province (Ref: Ontario)														
Ref: Ontario	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Newfl	1.67	84.6	1.70	86.4	1.66	84.3	1.84	98.9	1.66	84.8	----	----	1.54	89.9
PEI	0.80	21.0	0.82	21.7	0.79	20.8	0.93	25.3	0.80	21.1	----	----	1.08	31.1
Novasc	0.92	55.4	0.94	56.9	0.91	55.0	1.01	62.8	0.93	56.0	----	----	1.18	77.7
Newbr	0.82	42.5	0.92	48.6	0.88	46.2	0.94	50.8	0.81	42.2	----	----	0.99	54.4
Quebec	-1.11	-16.8	-0.91	-34.4	-0.97	-28.4	-0.94	-14.3	-1.09	-16.6	----	----	-1.67	-25.7
Manitoba	0.82	48.9	0.81	48.8	0.81	48.2	0.90	55.1	0.80	47.9	----	----	1.00	64.5
Saskatchwen	1.05	63.6	1.04	63.6	1.04	62.9	1.17	73.2	1.03	62.7	----	----	1.24	82.2
Alberta	1.04	58.1	1.05	59.4	1.02	57.2	1.21	67.9	1.03	57.4	----	----	0.80	66.9
British Columbia	0.30	25.2	0.30	25.1	0.29	24.4	0.25	20.9	0.29	24.4	----	----	0.97	89.7
Yukon	0.77	17.7	0.78	18.0	0.76	17.6	0.74	17.5	0.77	17.8	----	----	1.95	46.5
NWT	0.27	7.3	0.28	7.4	0.26	7.0	0.38	10.3	0.27	7.3	----	----	1.52	41.8
Nunavut	0.87	13.9			0.87	13.8	1.08	17.6	0.87	13.8	----	----	1.98	33.3
8.Experience Effect			0.89	14.2										
Non-Native	2.59	279.4	2.62	282.9	2.58	279.1	2.47	271.1	2.60	281.7	2.44	292.5	----	----
Foreign-Born	1.36	69.4	1.27	65.4	1.36	69.3	0.84	43.8	1.39	71.1	1.17	79.9	----	----
Foreign-Born * Ontario	-0.40	-13.1	-0.46	-15.0	-0.42	-13.6	-0.33	-10.8	-0.42	-13.6	----	----	----	----
Foreign-Born * B.C.	0.08	2.3	0.14	4.2	0.08	2.3	0.16	5.0	0.08	2.6	----	----	----	----
Non-Native * Alberta	-1.31	-61.1	-1.33	-62.3	-1.30	-60.8	-1.39	-65.6	-1.31	-61.37	----	----	----	----
Maximum Rho-square	0.2372		0.2343		0.2366		0.1912		0.2351		0.2036		0.1138	
Marginal Contribution in Rho-square	------		0.0029		0.0007		0.0461		0.0021		0.0337		0.1234	
Fixed-coefficient Rho-square	0.2372		0.2339		0.2298		0.1863		0.2350		0.1941		0.0991	
Marginal Contribution in Rho-square	------		0.0033		0.0075		0.0509		0.0023		0.0431		0.1381	

Table 3.6 The Effects of Ethnicity and Language Acculturation on Interprovincial Migration Propensities: The Case of French Ethnic Group.

Explanatory Variable	In Quebec			Not In Quebec		
	Anglophone British	Francophone French	Anglophone French	Anglophone British	Francophone French	Anglophone French
	A. Estimated Coefficients:					
	Migration Period: 1976-1981					
French * Quebec	0.00	-0.60	-0.60	0.00	0.00	0.00
French * Non-Quebec	*0.00*	0.00	0.00	0.00	0.09	0.09
English * Quebec	2.47	0.00	2.47	0.00	0.00	0.00
Quebec	-1.03	-1.03	-1.03	0.00	0.00	0.00
(French * English) * Quebec	0.00	0.00	0.36	0.00	0.00	0.00
(French * English) * Non-Quebec	0.00	0.00	0.00	0.00	0.00	-0.03
Total	**1.44**	**-1.63**	1.20	**0.00**	**0.09**	**0.06**
Odds Ratio:						
Ref.: Anglo British in Quebec	**1.00**	**0.05**	0.79	**0.24**	**0.26**	**0.25**
Ref.: Anglo British in Non-Quebec	**4.22**	**0.20**	3.32	**1.00**	**1.09**	**1.06**
	Migration Period: 1981-1986					
French * Quebec	0.00	-0.58	-0.58	0.00	0.00	0.00
French * Non-Quebec	*0.00*	0.00	0.00	0.00	0.47	0.47
English * Quebec	1.95	0.00	1.95	0.00	0.00	0.00
Quebec	-0.33	-0.33	-0.33	0.00	0.00	0.00
(French * English) * Quebec	0.00	0.00	0.57	0.00	0.00	0.00
(French * English) * Non-Quebec	0.00	0.00	0.00	0.00	0.00	-0.45
Total	**1.62**	**-0.91**	1.61	**0.00**	**0.47**	**0.02**
Odds Ratio:						
Ref.: Anglo British in Quebec	**1.00**	**0.08**	0.99	**0.20**	**0.32**	**0.20**
Ref.: Anglo British in Non-Quebec	**5.05**	**0.40**	5.00	**1.00**	**1.60**	**1.02**
	Migration Period: 1996-2001					
French * Quebec	0.00	0.21	0.21	0.00	0.00	0.00
French * Non-Quebec	*0.00*	0.00	0.00	0.00	0.62	0.62
English * Quebec	2.47	0.00	2.47	0.00	0.00	0.00
Quebec	-1.11	-1.11	-1.11	0.00	0.00	0.00
(French * English) * Quebec	0.00	0.00	-0.22	0.00	0.00	0.00
(French * English) * Non-Quebec	0.00	0.00	0.00	0.00	0.00	-0.65
Total	**1.36**	**-0.90**	1.35	**0.00**	**0.62**	**-0.03**
Odds Ratio:						
Ref.: Anglo British in Quebec	**1.00**	**0.10**	0.99	**0.26**	**0.48**	**0.25**
Ref.: Anglo British in Non-Quebec	**3.90**	**0.41**	3.86	**1.00**	**1.86**	**0.97**

3.6 Concluding Discussion

The main purpose of this chapter has been to study the roles of ethnicity and language acculturation in determining the propensities to make interprovincial migration in Canada in 1976-81, 1981-86, and 1996-2001, based on the micro data of the 1981, 1986 and 2001 censuses. Since these propensities are also subject to the strong effects of other explanatory factors, a multivariate analysis using a binomial logit model is conducted.

An important methodological contribution of this chapter is the clarification of the interpretational mistakes in the previous multivariate analyses of Trovato and Halli (1983 and 1990) that depended on the widely used log linear models. Despite the fact that their papers have been widely read and cited, no one has raised any questions about their mistakes until now. It seems that their method of interpretation is commonly used by other researchers who use the same kind of models. If this is true, there may be many misleading findings in the literature that must be reexamined.

Using a proper methodology, the empirical findings of this chapter turn out to be substantively more sensible than the earlier findings in the literature. With respect to the less complicated case of non-French minority ethnic group, the empirical data are found to be mostly supportive of the following two hypotheses.

H1: *The propensities to make interprovincial migration are lower for minority ethnic groups than for the mainstream ethnic group.*

H2: *The use of English as home language, which represents an important cultural shift towards the mainstream, increases the interprovincial migration propensities of minority ethnic groups.*

Thus, to the extent that interprovincial migration is a beneficial societal process that helps adjust labor supply to the changing labor demand in the Canadian spatial economy, minority ethnic groups make smaller contributions than the mainstream ethnic group. However, this difference is in general reduced by language acculturation.

It is worth noting that H1 and H2 are very strongly supported by the Italian ethnic group. As shown later in Chapter 4, this is the ethnic group that has succeeded in developing and maintaining a strong economic niche in construction industry. It has built strong and cohesive working-class communities that help make available to its members many relatively well-paying jobs that do not require advanced formal education. Among all non-French ethnic groups, the Italians have by far the lowest propensity to make interprovincial migration. Although switching the home language to English clearly enhances their interprovincial migration propensity, English-speaking Italians are still characterized by having relatively low propensity to do so.

The Jewish ethnic group's lack of support for H2 is particularly interesting. This is the ethnic group that has succeeded in shifting towards the mainstream of the Canadian society while maintaining the vitality of its ethnic culture and identity. With plenty of opportunities for economic betterment and upward social mobility within their ethnic communities, many of the members of this ethnic group have the luxury of forsaking

interprovincial migration as a useful means for advancement. The paradoxical combination of low geographical mobility and high socioeconomic achievement of the Jewish ethnic group is a worthy empirical case to keep in mind, especially when selective acculturation and multiculturalism are threatened by the rise of "intransigent nativism" and "forceful assimilationism" in North America (Portes and Rumbaut, 2001, p.271). The mode of assimilation and integration adopted by this ethnic group is what should be encouraged and emulated in a globalized world.

With respect to the more complicated case of the French ethnic group, the findings of this chapter are supportive of the following two hypotheses:

H3: *Among those residing outside Quebec, the propensities to make interprovincial migration are greater for the French ethnic group than for the mainstream ethnic group.*

H4: *This difference is greater for the French ethnic group that continues to use French as the home language than for the French ethnic group that has shifted the home language to English.*

Since a high proportion of the French out-migrants from the rest of Canada tend to select Quebec as their destination, this finding has confirmed the concern raised by Newbold (1996) and Liaw and Qi (2004) that the interprovincial migration process has the tendency to aggravate the spatial polarization of between the French and non-French populations in Canada. It is unfortunate that the support for H4 became successively stronger towards the late 1990s. Fortunately, this trend is countered by a mild narrowing

of the extremely wide gap in the propensities to leave Quebec between the English-speaking British and the French-speaking French.

Finally, how about the increasingly large ethnic groups from non-European sources? Well, that's the topic for future research. Hopefully, the findings of this chapter would serve as helpful references.

CHAPTER FOUR

THE LESS MIGRATORY GROUPS, AN EXPLANATION FROM THE ETHNIC ECONOMIC NICHE THEORY

4.1 Introduction

A remarkable feature revealed by the analysis in Chapter 3 is that among all the non-French ethnic groups studied there, Italians and Jews are the two least migratory ones through 1976-81, 1981-86, and 1996-2001. It was suggested that one of the main reasons for the persistently low interprovincial migration propensities of these two minority ethnic groups is that they have successfully developed and maintained strong ethnic economic niches.

In the literature, the main theory about ethnic economic niches has been developed by Waldinger (2000). Although his theory does not make an explicit link between the establishment and maintenance of ethnic economic niches on the one hand and the migration propensities of minority ethnic groups on the other, the richness of his theory makes such a link a useful academic exercise.

The main purposes of this chapter are (1) to define ethnic economic niches in an objective way, (2) to assess the existence or non-existence of ethnic economic niches for the ethnic groups defined in Chapter 3, and (3) to assess the economic benefits of ethnic

economic niches with respect to wage and employment status. The last assessment is particularly important, because the plausibility of the link between strong ethnic economic niches and low interprovincial migration propensities can be enhanced by the finding that ethnic economic niches indeed confer wage and employment benefits.

The organization of the remaining part of this chapter is as follows. Section 4.2 reviews Waldinger's theory. Section 4.3 introduces the data and the research methods used for empirical work. Section 4.4 shows the empirical results, including the verifying of the ethnic niches and the testing of the benefits generated by the ethnic niches for the Italians and Jews. Section 4.5 is a brief conclusion. And a discussion for the concentration of Germans and Ukrainians in agricultural industry is presented in the following Appendix C.

4.2 Review of Waldinger's Theory

The empirical problem that motivated Waldinger to formulate his theory of ethnic economic niche was the paradoxical coexistence of two phenomena in New York City since the 1970s: the economic decline of African American communities with a serious unemployment problem, and the rapid expansion of the economically dynamic communities of new immigrants who somehow managed to achieve a high employment rate. He was deeply dissatisfied with the two well-accepted theories that were used by others to explain the changing economic conditions of ethnic minorities in New York and other major cities of the United States: the "mismatch" and

"globalization" theories.

The mismatch theory considers the black workers' problems in big American cities as a result of the restructuring of the whole economy. The newly created jobs were mainly high-skilled ones, which were not suitable for the generally poorly-educated blacks. Due to the lack of low-end jobs, the blacks lost their economic base and started to suffer. Waldinger beat this theory with the example of the immigrants' successful integration to New York City's new economy system.

The globalization theory claims that a type of hourglass economy emerged in big urban areas during the economy restructuring in the second half of last century, and both top and bottom level jobs were created (Sassen, 1991 and 1998). In this dual city model, poorly-educated immigrants could do well in the service sector of the economy and so on, showing a high employment rate. However, Waldinger regarded this theory as just telling one side of the story, since it could not explain the African-Americans' unfortunate economic situation.

According to Waldinger, with the whites leaving the blue-collar jobs, the shrinking of the traditional industries were greatly compensated, and sometimes there were even more jobs vacated for the minorities than they ever had. There was never a lack of jobs for the poorly-educated blacks. The native blacks, mostly second or third generation of the migrants of the so-called Great Migration from the Southern states of the U.S. to the North, though had little improvement in terms of their educational attainment, held much higher aspiration for their career than their parents. Some of them,

with relatively better school accomplishment, managed to get jobs in public/administrative sectors, where discrimination was less severe. The rest and the large majority of the blacks who were not able to meet the requirement of such jobs would rather depend on the welfare system than take a disgraceful low-skilled, low-paid job. Meanwhile, the new immigrants came to the U.S. in a large amount, and happily took the opportunities. Once the immigrants were well settled down in the low-skilled jobs in various industries, they began to build barriers against the non-co-ethnic outsiders. The employers relied more and more on the network of the ethnic workers to hire new employees, who were informally trained for the new jobs by their relatives or co-ethnic friends and turned out to be more reliable and hard-working due to certain kind of supervisor mechanism within their ethnic community. By then, even if the blacks wanted to take a low-skilled job, there was no way for them to easily get one. Realizing the fact that the African-Americans and the immigrant Hispanics, and some of the new immigrants as well, all with poor education background, were actually in quite different economic positions in the big American cities, we should not use either the "mismatch" or the "globalization" theory to account for the complicated real-world situations.

Then, Waldinger began to talk about his own way of thinking of the problems. He pointed out that when the minority groups came into New York City, the ethnic members did not usually develop themselves individually in terms of their economic life. The whole group kept concentrating on some sets of economic specializations. Once an ethnic niche was formed in a certain industry, a protected environment emerged, which provided

the co-ethnics with privileged access to new jobs and made the current co-ethnic workers better paid than their counterparts of other minority groups, given the same personal attributes. For the outsiders, who were not a member of the ethnic group, such shortcuts did not exist, so even if they were able to get the information about newly vacant positions and manage to enter the niche, they might find it hard to catch up with the insiders with respect to income, sense of job security, and skill improvement. An important mechanism of the ethnic niche is the learning process of the ethnic workers through the ethnic network, where the experienced ones informally train the new comers and pass on the skills required by the jobs.

In order to prove the validity of the theory empirically, Waldinger introduced the "index of representation" into his work to measure a group's over or under representation in an industry.[4] Following this concept, he defined a niche as an industry in which a group's share is at least 1.5 times than its share of the total economy. Due to the fact that niches are easiest to establish in small industries, to capture a more meaningful picture of an ethnic group's employment situation, he further restricted the niche by the number of workers it hires, a minimum of one thousand people. According to this method, the African-Americans were found to shift into public sector niches, while different immigrant groups concentrated in some other niches. The differences among the industry sectors in creating new jobs and in setting entry requirements decided the economic

[4] If an index is bigger than 1 for any industry, then the group is over concentrated, while a number smaller than 1 shows the group's under concentration in an industry.

status of different groups. The Jews and Italians in New York City proved to have their own ethnic niches. Jews were overrepresented in retail and educational-professional sectors, while construction, wholesale food, bakeries and some other industries were Italians' economic niches.

In sum, Waldinger has shown that ethnic groups in New York City have a strong tendency to establish and maintain economic niches, and that such economic niches can help explain the different economic trajectories of not only the old and new immigrants but also native African Americans. To the extent that ethnic economic niches confer income and employment benefits, they can be expected to reduce the migration propensities of the ethnic groups with well-established and well-functioning economic niches. The remaining part of this chapter will carry out a systematic empirical investigation of this potential linkage with respect to the propensities to make interprovincial migration in Canada.

4.3 Data and Research Methods

PUMFs (Public Use Microdata Files) of the 1981, 1986, and 2001 population censuses are used in the empirical work. To verify an ethnic niche, first, ethnicity by industry will be cross-tabulated to get the proportions that ethnic group i takes up in any individual industry j (Pij) and in the whole economy (Pi). Then "index of representation" (IR) for ethnic group i in industry j is defined as followed:

$$IRij = Pij / Pi;$$

Following the rule used by Waldinger, ethnic i is considered to have an ethnic economic niche in industry j if IRij is greater than 1.5[5].

To see whether an ethnic economic niche is beneficial to the ethnic group in question, two kinds of regressions, a basic linear regression model and a binominal logit model, are used to assess its effects on wage income and employment status of its members.

The basic linear regression model adopted here is specified as follows,

$$Wij = \beta_{j0} + \beta_j' X_{ij} + \varepsilon_{ij}$$

where Wij is the observed wage of an individual person i who works in industry j; β_j' is a row-vector of unknown coefficients for industry j; X_{ij} is a column-vector of observable factors that might affect wage level, including educational attainment, age, ethnic origin, and provincial dummy variables for person i in industry j; β_{j0} is an unknown constant; and ε_{ij} is an error term.

[5] Waldinger's definition of an ethnic niche in his study of the New York City also includes a minimum number of workers that the industry is hiring. As he argued, a niche is easiest to form in a small industry, however, neither this kind of industry nor niche will play an important role in the whole economic picture in Canada. In our case, since we are doing a national wide study for Canada, the problem of a small-size industry should not be a serious issue. Actually, among all the industry categories in three censuses, there is only one category, the management industry in PUMFs 2001 census has less than one thousand people, and it will not be considered as a qualified niche. Besides this only exception, there is no need for a minimum number of workers for other industries.

In each industry, a person involved in an ethnic niche is expected to have a higher level of wage, with other factors controlled. In other words, the dummy variable representing the ethnic group i should have a positive coefficient, if the industry in question is the ethnic economic niche of this group.

The binominal logit model is used, and its format, goes as follows,

$$p_{ij} = \frac{e^{\beta_{j0}+\beta_j' H_{ij}}}{1+e^{\beta_{j0}+\beta_j' H_{ij}}}$$

where Pij is the probability that the person i in industry j turns out to be unemployed[6]; Hij is a column-vector of observable explanatory variables for person i in industry j, including education attainment, age, ethnic origin, and provincial dummy variables; β_j' is a row-vector of unknown coefficients for industry j; β_{j0} is an unknown constant.

Here, given other factors controlled, the coefficient of the dummy variable representing an ethnic group is expected to be negative, if industry j is this ethnic group's economic niche. If that is the case, we will be able to say that the forming of an ethnic

[6] According to the definition of Statistics Canada, the labour market activity refers to the status of the population 15 years of age and over in the week prior to Census Day within the five-year census interval, while a person's industry belonging is defined as the general nature of the business carried out in the establishment where the person worked and if the person did not have a job during the week prior to Census Day, the data related to the job of longest duration since January 1 the year before Census Year is used.

niche does give the members of the niche the economic advantage in the way of securing their jobs, so that makes them less likely to make long distance migrations.

In terms of the refining of data and picking of variables, several things need to be clarified here:

(1) The PUMFs 2001 census. This census is different from the previous two in the way that for some ethnic groups, we could no longer identify them when they are in the Atlantic Provinces. Due to this coding problem, people living in Atlantic Provinces 5 years before census year are excluded from the sample of the 2001 census.

(2) Data subset. For identifying ethnic economic niches, the data sets including all individuals aged 20 and over will be used. Once a niche is found, the further study of the benefits that the niche could provide will be done for only males, because males are the major component of the labour force, so that the results could be more realistic and less biased as the way in which much research of this kind has been done (Porter, 1965; Richmond, 1967; Goldlust and Richmond, 1973; Richmond and Verma, 1978). Just as Howard Palmer (1975) said in his book, "Data for women in the labour force are much less reliable than those for men", since "the proportion of women in the labour force appears to be rising", and "the proportion of women in the labour force vary considerably among the different origin categories" (p.109).

(3) Industry categories. In every census, there are two variables that could be used to represent industry categories and the more detailed one is chosen for all censuses to get

a more precise view of the whole economy[7]. However, even the more detail variable does not maintain the same set of specific industries through all three censuses. For example, "personal service" is identified in the 1981 census but not in the 1986 and 2001 censuses.

(4) Wages and total incomes. For some of the primary industries like agriculture, the variable "wages" is not a good measure of economic gains, since many farmers, especially farm owners, for example, tend to consider themselves as self-employed, and thus "wages", if is not reported as zero, could only account for a small part of the income. In the 2001 census dictionary, there is a variable named "net farm income", which might be a better indicator to describe the income in agriculture industry, but it is impossible to find it in the PUMFs of all three censuses. Given the restriction of data, the variable, "total income" will be used for agriculture in the similar assessment for Germans and Ukrainians' niche in agriculture industry in Appendix C. For other industries, "wages" becomes a good choice since it could exclude the influences of other incomes, such as investment income, so that we can get a purer picture of the situation within certain industry.

(5) Age, Education and Spatial Factors. In order to study the influence of an ethnic niche on wages/income and unemployed status, a set of variables other than ethnicity should be introduced to the regression models to control for the effects of other social or demographic factors. The differentials between younger and older, more and

[7] There is not much difference between each of the two classifications. The final results will not be essentially changed if the other variable is used instead.

less educated people, and also male and female are the most well-known basic factors for studying wage inequality in the economic world (Freeman and Katz, 1995), which might be helpful for my models here as well. Besides that, since Canada has a huge land area and is spatially quite uneven in terms of economic situation, it might also be useful to incorporate the provincial dummy variables as controls into the models.

Another methodological problem needs to be mentioned here is the so-called situation of "complete separation" for the logit model. When all members of certain sub-group have the same feature described by the dependent variable, complete separation happens, and the multivariable regression results will show a large negative estimated coefficient for this sub-group. For example, in our case, if the group of people with the age of 75 or elder shows a relatively big estimated coefficient in terms of magnitude, there might be a situation of complete separation. If further investigation proves that among all these people, all of them were employed, a case of complete separation could be verified. In that case, the estimated coefficient of this subgroup is arbitrarily large in magnitude, which is replaced by $-\infty$ in the table, and size of the at-risk population will be shown in the a note of each table.

4.4 Empirical Results

4.4.1 The Verifying of the Ethnic Niches and the Tabulation Results

Tables 4.1, 4.2, 4.3 show the IRs, calculated from the results of three sets of cross-tabulations of ethnicity by industry, for each of the three censuses, respectively.

Only those niches that exist in all three censuses will be chosen for the next stage of investigation so that the existence of them could be used to explain the long-lasting low mobility levels that have been observed for the Italians and Jews all the time in the previous chapter.

In the case of Italians, several niches are found in different censuses. For example, personal service (IR=3.48) in 1981 and accommodation/food (IR=2.27) in 2001. Construction has been shown to be the only niche that prevailed for Italians through all three censuses, though their concentration in this niche became less intense in 2001: the IR was 2.09 in 1981, 2.23 in 1986, and 1.63 in 2001. It will be picked as a qualified niche for Italians.

More persistent niches are found for Jews: wholesale trade (IR=2.26 in 1981, 2.08 in 1986, and 1.5 in 2001), finance/insurance[8] (IR=2.14 in 1981, 2.22 in 1986, and 2.05 in 2001) and health service (IR=2.36 in 1981, 2.45 in 1986, and 6.75 in 2001) are the niches that persisted through all three censuses. In addition to these three niches, educational service (IR=1.18 in 1981, 1.52 in 1986, and 1.15 in 2001) will be chosen for Jews too, because it is a well-known advantaged industry for Jews (Palmer, 1975; Reitz, Calzavera, and Dasko, 1981; Reitz, et al., 1990).

[8] For 2001 census, this category is a little different from the rest two censuses. Real estate becomes a separate industry from the previous finance/insurance/real estate industry. In the later part for regression, the two categories will be combined for 2001 census.

Most of the Germans and Ukrainians first came to Canada as poor peasants, and they had a long history of concentrating in agriculture ever since. Thus it is not surprising that Germans and Ukrainians both have their niches in agriculture all the way from the 1981 census to the 2001 census. For Germans, the niche is strengthened with the IR growing from 2.29 to 2.70 and then 2.73[9]. It is interesting that from a long term perspective, the share of agriculture in the whole German labour force rises from 11.34% in 1981 to 13.44% in 2001, with a small peak of 13.73% in 1986. This rise is contrary to the shrinking trend of overall employment in agriculture. Telling from the tabulation results, the labour force share for agriculture goes from 5.05%, to 4.97%, and then drops down to 4.52% during the time period of the three censuses. For Ukrainians, the degree of concentration in agriculture drops reasonably from 2.10 to 2.08 and then 1.59. Because these two groups are not the main concern of this chapter, their niches will be assessed later in Appendix C.

For the "other" ethnic group, accommodation/food service has been a niche for both census 1981 and 1986. This niche will be simply ignored, not only because it does not last for three censuses, but what is of more importance here is that the composite nature of this ethnic category makes the ethnic influence on economic specialization too complex to test.

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[9] To avoid the bias caused by the removal of people from Atlantic Provinces for 2001 census, another set of tabulations just for people living outside Atlantic Provinces are made for three censuses, and the share of agriculture slightly changes to 11.96%, 13.77% and 13.44%, which will not affect the over all picture.

Table 4.1 The Index of Representation for Identifying Ethnic Niches in 1981 Census.

	British	French	German	Italian	Jewish	Ukrainian	Other
Agriculture	1.01	0.71	**2.29**	0.14	0.10	**2.10**	1.08
Other Primary	1.06	1.04	0.95	0.34	0.07	1.11	1.01
Manufacturing	0.95	1.06	0.92	1.29	0.77	0.80	1.02
Construction	0.90	0.92	1.31	**2.09**	0.40	1.08	1.05
Transportation/Storage	1.09	0.99	0.94	0.70	0.46	1.24	0.91
Communication	1.13	1.03	0.72	0.58	0.40	0.91	0.91
Electric Power/Gas/Water Util.	1.11	0.94	0.94	0.71	0.31	1.11	0.95
Wholesale Trade	1.07	0.90	1.03	0.87	**2.26**	0.89	0.94
Retail Trade	0.95	1.12	0.92	1.13	1.45	0.93	0.91
Finance/Insurance/Real Estate	1.15	0.83	0.90	0.81	**2.14**	0.91	0.93
Education & Related	1.04	1.00	0.95	0.73	1.18	0.98	0.99
Health/Welfare/Religious Organizations	0.93	1.21	0.72	0.56	**2.36**	0.79	0.96
Recreation Service	1.08	1.01	0.75	0.84	**1.55**	0.71	0.93
Business Management	1.11	0.78	0.75	0.70	**3.01**	0.77	1.11
Personal Service	0.76	1.04	0.91	**3.48**	**1.96**	1.18	0.92
Accommodation/Food	0.70	1.05	0.59	1.33	1.04	0.86	**1.61**
Miscellaneous Services	0.95	1.05	0.95	0.79	1.33	1.05	1.05
Public Admin & Defence	1.09	1.09	0.79	0.46	0.38	0.98	0.89

Table 4.2 The Index of Representation for Identifying Ethnic Niches in 1986 Census.

	British	French	German	Italian	Jewish	Ukrainian	Other
Agriculture	0.96	0.75	**2.70**	0.13	0.03	**2.08**	1.14
Other Primary	1.11	1.00	0.95	0.20	0.09	0.98	0.91
Manufacturing	0.95	1.07	0.91	1.23	0.78	0.80	1.06
Construction	0.91	0.97	1.35	**2.23**	0.41	1.10	0.98
Transportation/Storage	1.11	0.97	0.96	0.77	0.38	1.24	0.78
Communication/Utility	1.11	0.97	0.84	0.71	0.49	1.22	0.83
Wholesale Trade	1.05	0.90	1.13	0.91	**2.08**	0.94	0.92
Retail Trade	0.94	1.12	0.90	1.19	1.20	0.88	0.98
Finance/Insurance	1.05	0.91	0.90	0.89	**2.22**	0.93	0.96
Business Service	1.07	0.83	0.72	0.74	**3.23**	0.84	1.08
Federal Govt.	1.22	1.00	0.61	0.29	0.41	0.79	0.65
Other Govt.	1.04	1.13	0.64	0.59	0.35	1.08	0.88
Educational Service	1.03	1.00	0.83	0.75	**1.52**	1.16	0.94
Health Social Service	0.86	1.34	0.66	0.50	**2.45**	0.73	1.04
Accommodation/Food	0.79	0.89	0.67	1.23	0.90	0.72	**1.92**
Other Service	1.03	0.93	0.84	1.14	1.13	0.96	1.02

Table 4.3 The Index of Representation for Identifying Ethnic Niches in 2001 Census.

	British	French	German	Italian	Jewish	Ukrainian	Other
Agric./For/Fishing/Hunting	0.90	1.02	**2.73**	0.16	0.00	**1.59**	0.86
Mining/Oil/Gas	1.09	0.93	1.08	0.41	0.30	0.91	0.99
Utilities	1.16	0.00	1.27	0.91	0.00	1.46	0.96
Construction	0.88	1.18	1.19	**1.63**	0.35	1.00	0.99
Manufacturing	0.94	1.19	0.94	0.99	0.60	1.04	1.01
Wholesale Trade	1.01	1.33	0.94	0.76	**1.50**	1.16	0.99
Retail Trade	1.03	0.70	0.81	1.17	0.85	0.95	1.02
Transportation/Warehousing	1.01	1.22	0.96	0.66	0.30	1.13	1.00
Inform/Culture Industry	1.04	0.62	0.69	1.49	0.00	1.05	1.02
Finance/Insurance	1.25	0.67	0.68	1.38	**2.05**	0.97	0.99
Real Estate/Rental	1.01	1.34	1.07	1.38	1.20	0.82	0.99
Prof/Science/Tech Service	1.19	0.75	0.75	0.49	**2.45**	0.80	1.01
Management	**2.89**	0.00	0.00	**10.28**[10]	0.00	0.00	0.78
Administrative Service	1.06	1.28	0.73	1.02	0.65	0.79	1.02
Educational Service	0.92	0.58	0.59	**1.58**	1.15	1.04	1.05
Health/Social Service	0.94	1.13	0.81	**1.53**	**6.75**	0.86	1.01
Arts/Recreation	1.28	0.84	0.54	1.03	**3.05**	0.60	1.01
Accommodation/Food	0.73	0.68	0.39	**2.27**	0.55	0.72	1.10
Other Service (Ex Public Adm.)	1.03	0.82	0.63	1.01	**1.95**	0.72	1.04
Public Administration	1.07	1.36	0.91	0.22	0.45	1.03	1.00

[10] As we have mentioned earlier in this chapter, this industry has only 810 people, which is even smaller than the criterion used for the New York City in Waldinger's research. Although Italians are highly concentrated in this industry, it will not be thought as a niche and will not be tested in the coming part of the study.

4.4.2 The Multivariate Findings about the Benefits of an Ethnic Niche

Before any tests for the niches' beneficial influence on its members are carried out, the regression and logit models are used to see if our selected control variables have theoretically sensible effects. Putting aside the effect of ethnic niche on wages and unemployment status for now, we could tell from Table 4.4 that, for Canada and all its industries as a whole, for the three censuses of 1981, 1986 and 2001, the effects of educational attainment and age on wage and unemployment status show substantively meaningful patterns. With respect to educational attainment, people with post-secondary level of schooling tend to do better than those with secondary, and even much better than those with only primary level of education (the reference group) in terms of both wage and employment. These empirical findings are largely consistent with those of Freeman and Katz (1995), with the minor exception that in the 1986 census, those with secondary education are slightly less prone to being unemployed than those with post-secondary education. Taking into account the economic situation in Canada during 1981 to 1986, this reversal might be due to the recession at the time, which caused a strong return migration from Alberta and B.C. back to Manitoba, Saskatchewan and Atlantic provinces[11]. Since primary migration is positively selective by educational attainment, among these return migrants, there were probably more higher educated people who lost their jobs and became unemployed.

[11] Further support for this could also be seen from coefficients of the provincial dummy variables in the table.

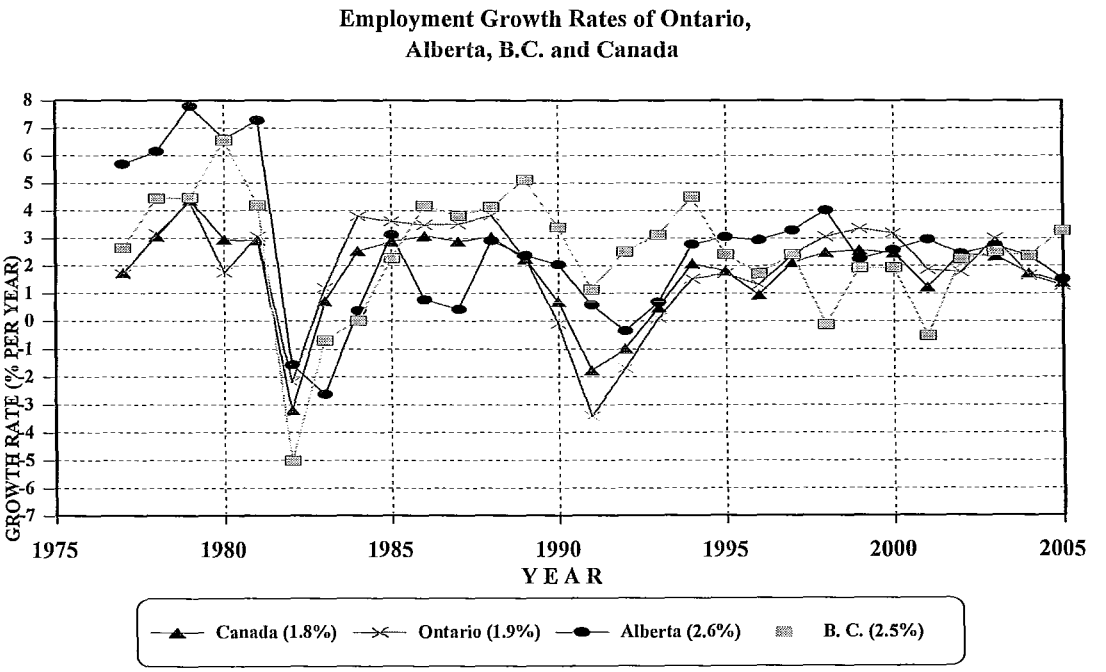
Table 4.4 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate: for Males of All Ethnic Groups and All Industries in Canada.

Explanatory Variable	1981				1986				2001			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	7513	74.3	-3.03	-60.3	7952	53.4	-2.63	-63.7	11002	40.4	-2.79	-57.3
Secondary	3439	37.2	-0.31	-6.2	4631	36.4	-0.50	-12.4	5497	26.7	-0.28	-6.3
Post-Sec	5475	75.9	-0.49	-11.1	7934	77.5	-0.45	-13.7	14213	81.2	-0.39	-10.0
Aged 25-34	5892	59.1	-0.75	-16.1	9797	67.6	-0.67	-18.1	15007	56.3	-0.83	-17.6
Aged 35-44	9517	89.3	-1.47	-23.1	16110	107.0	-1.14	-26.0	24112	94.1	-1.14	-24.1
Aged 45-54	9473	84.7	-1.47	-21.6	16873	103.4	-1.28	-24.9	26592	101.6	-1.31	-25.5
Aged 55-64	7326	59.5	-1.01	-15.2	13803	76.3	-1.04	-19.0	20566	68.3	-1.26	-19.7
Aged 65-74	-907	-3.9	-1.90	-8.7	1466	4.3	-2.98	-10.2	3586	7.2	-1.50	-10.8
Aged 75_	-5236	-9.9	-3.24	-3.2	-3529	-4.8	-3.84	-3.8	-1198	-1.2	-2.36	-5.2
Atlantic	-2682	-22.4	0.91	15.1	-4979	-29.2	1.04	22.0	----	----	----	----
Quebec	-1326	-16.3	0.81	17.4	-2978	-25.6	0.60	14.9	-6069	-35.0	0.40	10.1
Manitoba	-1707	-10.5	0.06	0.6	-3144	-13.4	-0.01	-0.1	-7440	-20.7	0.02	0.2
Saskatchewan	-2875	-16.9	-0.48	-3.4	-5371	-22.5	0.02	0.2	-8260	-21.9	-0.04	-0.5
Alberta	1193	9.8	-0.74	-6.5	-621	-3.9	0.60	11.6	-241	-1.0	-0.18	-2.9
B.C.	1759	15.8	0.04	0.48	-1414	-9.2	0.76	15.97	-3399	-15.7	0.39	8.09
Adj R Sq /Rho-Sq	0.1373		0.0610		0.1565		0.0465		0.1215		0.0297	
No. of Obs.	127835				134757				185325			

Table 4.5. Employment growth rates of Canada and Provinces (%).

Year	Canada	Nfld	P. E. I.	N. S.	N. B.	Quebec	Ontario	Mani.	Sask.	Alberta	B. C.
1976-1981	3.0	3.2	1.8	1.9	2.2	1.9	2.8	1.5	2.4	6.5	4.4
1981-1986	1.2	0.1	2.0	1.3	1.0	1.0	1.9	1.2	1.3	0.0	0.1
1996-2001	2.2	1.7	1.6	1.9	1.5	1.9	2.7	1.4	0.2	3.0	1.1

Figure 4.1 Employment Growth Rates of Ontario, Alberta, B.C. and Canada.



With respect to age, the effect is quite clear for all censuses as well. The wage starts to go up from the age of 20-24 (the reference group), when many young people join the labour force for the first time. It reaches its peak around age 45-54, and then declines as the age grows. The unemployment status follows the pattern in opposite direction and lags just one step behind, with its bottom found in the 55-64 age interval. If we have the process drawn into a curve, it should look very much like the one in the famous Rogers's model (Rogers, Raquillet, and Castro, 1978), which describes the pattern of mobility levels in people's life course.

When it comes to the effects of the provincial dummies, they reflect the persistent and fluctuating aspects of the Canadian spatial economy quite well. The wage pattern is clear throughout three censuses. The so-called "have not" provinces persistently show a lower level than the "have" provinces of Alberta, B.C. and Ontario. The unemployment status pattern appears to be more complicated. Among people in the "have not" provinces, those who were in the Atlantic provinces or Quebec, on the one hand, were more likely to be unemployed than their counterparts in Ontario. Those people in Saskatchewan or Manitoba, on the other hand, seemed to be less likely to be unemployed than those in Ontario, which is not a reflection of the economic strength of the two provinces. Their low unemployment rates were mainly caused by the selective out-migration of the young adults, most of whom leave for jobs in other places at the very beginning of their career. When employment growth rate is used as a criterion for economic vitality, Saskatchewan and Manitoba rank much lower, which could be seen in Table 4.5. For the "have"

provinces, the contrast between the economic situations Alberta and Ontario is well reflected by the estimated coefficients of the dummy variable "Alberta". In the 1981 census year, thanks to the booming oil industry, people in Alberta were less likely to lose their jobs than those in Ontario, where manufacturing industry was weakened by high energy prices and foreign competition. In the 1986 census year, the sharp decline of energy prices helped Ontario to come out of the nationwide economic recession of the early 1980s faster than Alberta so that the risks of being unemployed became higher for people in Alberta (Liaw, 1990; Newbold and Liaw, 1994). In the 2001 census year, the economy in Ontario dropped slightly behind Alberta's, people in Alberta enjoyed more job security again. However, for B.C., its unemployment rate tends to be persistently higher than that of Ontario. This difference may be partly related to the strong power of the labour union in B.C. that fought for the employees' wage and benefits but could meanwhile reduce the employers' motivation to hire more workers or sometimes cause the employers to lay off current workers. Table 4.5 and Figure 4.1 help us better understand the economic fluctuation in Canada by using the employment growth rate as a measurement.

Having shown that our chosen control variables have substantively sensible effects, we can now start assessing the potential effects of ethnic economic niches. To be consistent with Waldinger's theory about an ethnic niche, the coefficient of the ethnicity variable representing the ethnic group in question should have a positive sign in the

regression model for wage and a negative sign in the logit model for unemployment status.

Italians in Construction

When restricting the sample to only those engaged in construction industry where Italians form a persistent niche, the estimation results strongly support the idea that construction industry is more beneficial to Italians than to others. This industry conferred to the Italians a wage advantage of $712 in 1981, $3,009 in 1986, and $5,120 in 2001, although the wage advantage in 1981 was not statistically different from zero (t=1.9). It also provided a strong protection against unemployment to the Italians. In this industry, the odds ratio of being unemployment for Italians was as low as 0.29 in 1981, 0.55 in 1986, and 0.44 in 2001. (Table 4.6)

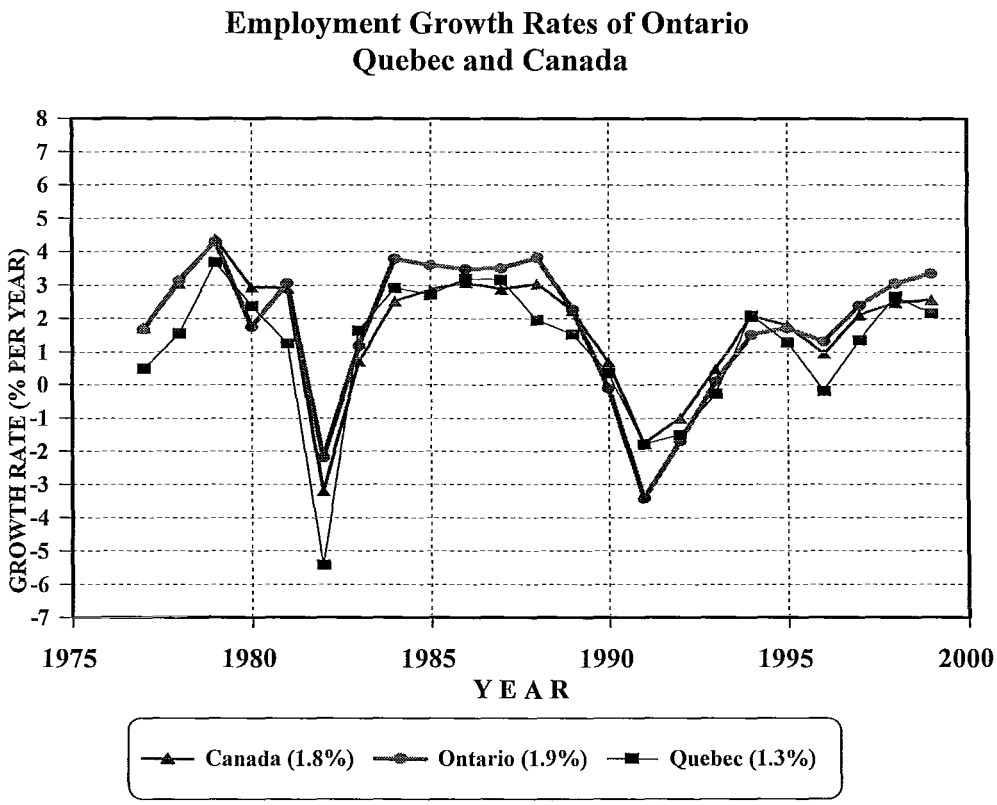
In order to understand why in construction industry the wage advantage of Italians was not statistically significant in the1981 census, it may be helpful to consider the spatial economy of Canada prior to 1981. As is shown in Appendix A (Tables A.1 and A.2), most of the Italians were concentrated in the two provinces of Quebec and Ontario, where the provincial economies, as reflected by their job creation capacities, were not strong (in Ontario) or quite weak (in Quebec) between 1976 and 1981 (Figure 4.2). Given the sensitivity of construction industry to economic cycles, the lackluster performance of the economies of these two provinces might have a depressing effect on the wage income

Table 4.6 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate in Construction Industry: Italian Males versus Other Males.

Explanatory Variable	1981				1986				2001			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	7211	23.8	-2.88	-20.3	8734	21.4	-2.79	-23.7	15259	20.6	-3.44	-20.4
Italian	712	1.9	-1.23	-3.4	3009	5.9	-0.60	-2.8	5120	5.8	-0.81	-2.4
Secondary	1397	4.5	-0.44	-2.8	1812	4.7	-0.51	-4.4	1334	2.5	-0.29	-2.1
Post-Sec	4224	19.5	-0.54	-4.6	4935	16.9	-0.35	-4.2	8789	19.5	-0.32	-2.8
Aged 25-34	4833	16.3	-0.57	-4.3	6209	15.3	-0.46	-4.4	9678	12.8	-0.65	-3.7
Aged 35-44	7162	22.4	-1.13	-6.8	10418	24.3	-0.68	-5.9	12834	17.7	-0.65	-4.0
Aged 45-54	6968	20.8	-0.80	-4.9	10830	23.3	-0.65	-5.1	14335	19.1	-0.60	-3.6
Aged 55-64	4749	11.9	-0.68	-3.6	8452	15.9	-0.62	-4.1	12368	14.4	-0.13	-0.7
Aged 65-74	-34	0.0	-1.35	-2.3	1497	1.1	-2.60	-2.6	3155	2.1	-0.76	-1.8
Aged 75_	-4752	-1.9	-∞	----	-2752	-0.8	-∞	----	-793	-0.2	-∞	----
Atlantic	-2079	-5.9	1.19	7.9	-5056	-10.5	1.43	127.4	----	----	----	----
Quebec	-197	-0.7	0.94	6.9	-267	-0.7	0.94	11.3	-2273	-4.4	1.03	8.2
Manitoba	-390	-0.8	0.13	0.4	-2348	-3.4	0.36	8.0	-3677	-3.6	-0.15	-0.5
Saskatchewan	701	1.3	-0.23	-0.7	-1444	-2.1	0.63	1.6	-4209	-3.9	0.76	3.2
Alberta	3808	11.7	-1.06	-3.7	-771	-1.8	0.98	3.1	4291	7.1	-0.15	-0.7
B.C.	2743	8.6	-0.27	-1.3	-2120	-4.8	1.15	7.7	-3133	-5.3	0.63	4.2
Adj R-Sq/Rho-Sq	0.1018		0.0725		0.0941		0.0462		0.0608		0.0355	
No. of Obs.	12883				12946				17917			

Note: The numbers of observations for the groups of age 75 and elder for the three censuses are 20, 19 and 46 respectively.

Figure 4.2 Employment Growth Rates of Ontario, Quebec and Canada.



of the construction industry there and hence result in the diminution of the overall advantage of the Italians in this industry.

Overall, the economic niche created by the Italians in the construction industry of Canada strongly supports Waldinger's theory. The wage and employment benefits of this ethnic economic niche can be considered as an important reason for the very low interprovincial migration propensities of the Italians in Canada.

Jews

In Wholesale Trade

In this industry, Jews have gained a persistently significant wage advantage of $3,203 in 1981, $8,971 in 1986 and $16,603 in 2001. However, with respect to the niche's protection to the ethnic workers from being unemployed, the result is not supportive. Although the odds ratios of being unemployed are as low as 0.76 and 0.24 for 1981 and 1986 censuses, neither of them is statistically significant, with both t-ratios being less than 2.0. For 2001 census, the odds ratio is 1.03, slightly bigger than 1, and again, the result is not statistically significant. (Table 4.7)

In Finance/Insurance/Real Estate

For the 2001 census, the two separate industries of finance/insurance and real estate are combined so that the niche could be consistent throughout the three censuses. Again, in this niche, Jews are significantly better paid all the time, with a wage benefit of

$4,564 in 1981, $4,923 in 1986 and $8,515 in 2001. When finance/insurance and real estate are separated as the original classifications in 2001 census, for the wage regression, the coefficients of the dummy variable representing Jews are both positive, but only significant for the real estate industry. Thus, the significance of the Jewish effect in the combined run might come mostly from the real estate industry.

With respect to the effects on unemployment, the estimated coefficient of the Jewish dummy variable for the 1981 census turns out to be negative infinity, because among the 123 Jews in the sample, none was unemployed (i.e. there was a "complete separation" phenomenon). In other words, the sample suggests the complete protection of the Jew against unemployment by this industry in 1981. For the 1986 and 2001 censuses, the t-ratios of the estimated coefficients are both smaller than 2.0 (Table 4.8). A possible reason for this finding might be that the overall unemployment rate was extremely low in this industry (1.7% and 2.33% according to the 1981 and 1986 censuses, and 1.33% in finance/insurance and 1.2% in real estate according to the 2001 census) so that unemployment was not an important economic issue.

In Health Service

For this niche, the coefficients of the "Jews" variable are not significantly different from zero in both models, because the associated t-ratios are all smaller than 2.0 in magnitude. For 1981 and 1986 census, the effects on wage turn out to be negative, -$1,353 and -$3,774 respectively, with the t-ratio of -1.2 and -1.9. Although this effect

increases to a positive $1,729 in 2001, the corresponding t-ratio (0.6) is much smaller in magnitude. With respect to the protection against unemployment, all the estimated coefficients of this variable turned out to be not significantly different from zero (Table 4.9). In short, health service industry was in general neither advantageous nor disadvantageous to the Jews.

In Educational Service

A significant wage advantage of $2,998 and $12,907 is found for Jews in the educational service industry for 1986 and 2001 census, respectively. For 1981 census, the wage benefit is $1,769, but with a t-ratio of only 1.8. Support for Waldinger's theory is shown by the occurrence of two cases of complete separation (involving 110 and 118 persons) for the unemployment status analysis for 1986 and 2001 census. For 1981 census, again, the estimated coefficient (-0.42) is of a right sign, but with a t-ratio smaller than the 2.0 standard. (Table 4.10)

In all, for Jews, Waldinger's theory is moderately supported and there is no strong evidence against it. Wage seems to be a more meaningful measure than unemployment status for assessing the potential benefits of ethnic economic niches.

Table 4.7 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate in Wholesale Industry: Jewish Males versus Other Males.

Explanatory Variable	1981				1986				2001			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	7848	18.7	-3.31	-14.9	8767	14.2	-2.79	-15.3	13154	10.5	-3.40	-13.6
Jews	3203	3.7	-0.27	-0.4	8971	6.8	-1.44	-1.4	16603.	5.3	0.03	0.0
Secondary	3034	8.4	-0.29	-1.4	3896	7.8	-0.57	-3.3	7182	8.3	-0.01	0.0
Post-Sec	4212	13.1	-0.57	-2.7	6606	14.8	-0.38	-2.5	15923	20.2	-0.02	-0.1
Aged 25-34	5978	14.4	-0.44	-2.1	10233	17.1	-0.56	-3.4	16046	13.0	-0.73	-2.9
Aged 35-44	10320	22.8	-1.18	-4.2	17550	27.6	-1.09	-5.3	28563	24.0	-0.73	-3.1
Aged 45-54	11488	23.9	-1.39	-4.2	17783	25.8	-1.35	-5.4	30760	25.0	-0.69	-2.8
Aged 55-64	9218	17.3	-0.62	-2.1	15203	19.7	-0.74	-3.1	25014	17.9	-1.23	-3.5
Aged 65-74	3236	3.4	-0.89	-1.5	9034	5.7	$-\infty$	----	16249	6.3	-0.21	-0.4
Aged 75_	-5779	-2.6	$-\infty$	----	-4512	-1.3	$-\infty$	----	1092	0.2	$-\infty$	----
Atlantic	-2138	-4.0	0.87	3.3	-3749	-4.8	0.67	2.8	----	----	----	----
Quebec	-940	-2.7	0.72	3.5	-2996	-6.1	0.66	3.9	-8945	-11.6	0.23	1.3
Manitoba	-629	-1.0	-0.14	-0.3	-2682	-2.8	0.04	0.1	-9629	-5.9	-0.89	-1.5
Saskatchewan	-271	-0.4	$-\infty$	----	-1992	-2.1	-0.09	-0.2	-9244	-5.4	-1.20	-1.7
Alberta	3980	7.6	-0.34	-0.8	929	1.4	0.50	2.3	-86	-0.1	-0.14	-0.5
B.C.	2855	6.1	0.17	0.6	-1128	-1.7	0.34	1.4	-3598	-3.7	-0.02	-0.1
Adj R-Sq/Rho-Sq	0.1359		0.0517		0.1489		0.0410		0.1292		0.0154	
No. of Obs.	7352				7691				10786			

Note: The numbers of observations for the groups of age 75 and older for the three censuses are 28, 25 and 35 respectively and 304 for Saskatchewan for 1981 census, 123 for age group 65-74 for 1986 census.

Table 4.8 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate in Finance/Insurance/Real Estate Industry: Jewish Males versus Other Males.

Explanatory Variable	1981				1986				2001(combined)			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	7962	8.9	-2.87	-8.3	5994	4.7	-2.57	-8.9	6772	3.2	-3.13	-8.9
Jews	4564	3.2	-∞	----	4923	2.4	0.03	0.0	8515	2.2	0.46	0.6
Secondary	3157	4.8	-0.31	-1.0	5914	6.4	-0.51	-2.2	9052	5.3	-0.15	-0.4
Post-Sec	3937	6.7	-0.52	-1.8	8646	10.7	-1.05	-4.7	18549	12.3	-0.27	-0.9
Aged 25-34	9798	12.0	-0.65	-2.3	14642	12.3	-0.57	-2.1	24638	13.0	-0.85	-3.0
Aged 35-44	16577	19.5	-1.81	-4.3	25734	21.6	-1.10	-3.8	41150	22.3	-1.41	-4.6
Aged 45-54	16350	18.3	-1.86	-4.0	25587	20.2	-1.09	-3.4	39838	21.4	-0.96	-3.4
Aged 55-64	10468	11.0	-1.06	-2.7	18426	13.5	-1.07	-3.1	30958	15.2	-1.83	-4.2
Aged 65-74	306	0.2	-2.08	-2.0	8048	4.3	-2.61	-2.5	11747	4.2	-2.62	-2.6
Aged 75_	-2476	-0.9	-∞	----	-1044	-0.3	-∞	----	13015	2.8	-1.25	-1.2
Atlantic	-2857	-2.9	0.92	2.6	-6067	-4.4	0.67	1.9	----	----	----	----
Quebec	-1230	-2.2	0.38	1.4	-2999	-3.9	0.43	1.8	-10725	-9.4	0.16	0.7
Manitoba	-2084	-1.8	-1.18	-1.2	1485	0.9	0.24	0.5	-6248	-2.4	0.10	0.2
Saskatchewan	-900	-0.7	-0.46	-0.6	-1922	-1.1	-0.10	-0.2	-8861	-3.3	0.17	0.3
Alberta	1635	2.0	-0.01	0.0	2034	1.8	0.26	0.8	-8281	-5.3	-0.60	-1.4
B.C.	2384	3.1	-0.38	-0.8	-1482	-1.5	0.53	1.8	-7651	-5.7	0.13	0.5
Adj R-Sq/Rho-Sq	0.1281		0.0660		0.1381		0.0441		0.1133		0.0310	
No. of Obs.	4712				5313				8844			

Note: The numbers of observations for the groups of age 75 and older for 1981 and 1986 census are 30 and 44 respectively and 123 for Jews for 1981 census.

Table 4.9 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate in Health Care/Social Assistance Industry: Jewish Males versus Other Males.

Explanatory Variable	1981				1986				2001			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	3835	5.0	-2.92	-8.4	3759	3.0	-3.03	-9.2	996	0.4	-2.31	-6.1
Jews	-1353	-1.2	0.35	0.5	-3775	-1.9	-0.52	-0.5	1739	0.6	-0.10	-0.1
Secondary	2618	3.5	-0.13	-0.4	2920	2.5	0.36	1.2	5237	2.6	-0.72	-2.1
Post-Sec	4574	9.4	-0.70	-2.6	6810	8.2	-0.07	-0.3	17939	11.1	-1.30	-4.6
Aged 25-34	5922	8.4	-0.73	-2.6	7659	6.9	-0.64	-2.7	12662	5.9	-0.99	-2.8
Aged 35-44	8673	11.8	-1.94	-4.2	13152	11.6	-1.61	-5.2	22098	10.7	-1.40	-4.0
Aged 45-54	8208	10.8	-1.32	-3.5	15710	12.4	-1.37	-3.8	23192	11.2	-1.43	-4.0
Aged 55-64	7155	9.1	-1.56	-3.6	13628	10.4	-2.01	-4.1	22776	9.9	-1.80	-3.7
Aged 65-74	1183	1.0	-∞	----	3930	1.7	-∞	----	10573	3.1	-1.93	-1.9
Aged 75_	-3338	-1.6	-∞	----	-1765	-0.4	-∞	----	5106	0.9	-∞	----
Atlantic	50	0.1	1.00	2.8	479	0.4	1.17	3.5	----	----	----	----
Quebec	1985	4.1	0.52	1.8	1912	2.5	0.51	2.0	539	0.5	-0.06	-0.2
Manitoba	827	0.9	-0.27	-0.4	1122	0.7	0.22	0.4	-1166	-0.5	0.65	1.6
Saskatchewan	1120	1.0	0.48	0.8	-47	0.0	-0.15	-0.2	-1494	-0.6	0.24	0.4
Alberta	-264	-0.3	-∞	----	5561	4.3	0.44	1.1	11142	6.4	0.02	0.0
B.C.	-365	-0.5	0.03	0.0	-1297	-1.1	0.56	1.5	5010	3.5	0.70	2.2
Adj R-Sq /Rho-Sq	0.0683		0.0950		0.0754		0.0710		0.0705		0.0637	
No. of Obs.	4306				4121				6350			

Note: The numbers of observations for the groups of age 75 and older for the three censuses are 41, 20 and 44 respectively and 252 for Alberta for 1981 census, 164 and 97 for age group 65-74 for 1981 and 1986 census respectively.

Table 4.10 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate in Educational Service Industry: Jewish Males versus Other Males.

Explanatory Variable	1981				1986				2001			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	-2062	-3.4	-2.48	-6.9	-2463	-3.0	-2.36	-8.1	-2668	-1.8	-2.86	-5.7
Jews	1769	1.8	-0.42	-0.4	2998	2.3	-∞	----	12907	5.4	-∞	----
Secondary	5674	9.8	0.20	0.6	6300	8.1	-0.28	-0.9	5786	4.2	0.41	0.8
Post-Sec	12153	34.2	-0.81	-2.9	16014	31.2	-0.31	-1.4	20927	19.2	0.13	0.3
Aged 25-34	10378	19.4	-1.41	-5.7	12087	16.8	-0.71	-3.5	15006	12.2	-1.34	-4.9
Aged 35-44	18269	34.0	-2.32	-7.3	24890	35.6	-1.97	-8.0	30546	25.8	-1.65	-6.1
Aged 45-54	19311	34.5	-3.14	-6.4	28156	38.9	-2.45	-7.7	38371	33.2	-2.38	-7.8
Aged 55-64	16940	28.5	-2.06	-5.5	25981	32.5	-1.83	-5.7	36884	29.4	-2.31	-6.0
Aged 65-74	6882	6.0	-2.28	-2.2	13362	8.4	-∞	----	12542	5.2	-2.05	-2.0
Aged 75_	-684	-0.3	-∞	----	4231	1.0	-0.11	-0.1	13622	2.4	-∞	----
Atlantic	-2829	-6.7	1.02	3.0	-3997	-6.7	0.56	2.1	----	----	----	----
Quebec	-507	-1.7	1.27	4.8	-3060	-7.3	0.34	1.6	-3440	-5.3	0.08	0.3
Manitoba	-1418	-2.3	0.63	1.2	-1959	-2.4	0.58	1.6	-6517	-5.3	0.08	0.2
Saskatchewan	-1022	-1.7	0.11	0.2	-1552	-1.8	0.27	0.6	-4250	-3.2	0.28	0.6
Alberta	16	0.0	-0.43	-0.7	-1823	-3.0	0.56	2.1	-1469	-1.6	0.11	0.3
B.C.	8	0.0	0.08	0.2	-2670	-4.7	0.97	4.1	-2259	-2.9	0.29	1.0
Adj R-Sq/Rho-Sq	0.3539		0.1386		0.3803		0.0887		0.2567		0.0715	
No. of Obs.	6466				6818				8029			

Note: The numbers of observations for the groups of age 75 and older for 1981 and 2001 census are 14 and 18 respectively and 86 for age group 65-74 for 1986 census, and 110 and 118 for Jews for 1986 and 2001 census respectively.

4.5 Conclusions

According to Waldinger's criteria of a qualified niche, the construction industry is found to be a persistent niche for the Italians, and wholesale, finance/insurance/real estate and health service industries, and educational service industry turn out to be niches for the Jews to some extent.

Italians are shown to have both wage and job security benefits from their niche in construction industry, while Jews are doing better than their counterparts with other ethnic origins in wholesale, finance/insurance/real estate and educational service industries either in terms of wage or unemployment status. The theory is supported strongly by the Italian case, and moderately by the Jewish case.

With the economic niches providing their ethnic workers better-paid and more-secure jobs, the two ethnic groups gain strong power in holding their members within the community. From the individual's point of view, the economic benefits of ethnic economic niches tend to reduce the incentive to take the risk of making interprovincial migration. In sum, this study has confirmed that the very low propensities of the Italians and Jews to make interprovincial migration can be partly accounted for by their successful establishment and maintenance of economic niches.

CHAPTER FIVE

THE SECOND GENERATION, APPROACHING ETHNICITY-MIGRATION RELATION FROM THE ACCULTURATION THEORY

5.1 Introduction

The post-1965 "new immigrants" arrived at the U.S. in a unique time period with a distinct socioeconomic and political environment from the old European immigrants, who came a century ago. With the transformation of the inflow of immigrants from single individual adults to entire families with foreign-born children, and with infants born in the U.S gradually growing up, people began to realize that the simple study of the first generation of the new immigrants is not enough, and some thoughtful scholars brought up their theories about the second generation issues (Alba, 1990; Waters, 1990 and 1994; Portes and Zhou, 1993; Portes and Rumbaut, 2001; Yinger, 1994; Waters and Eschbach, 1995).

In Canada, the study of second-generation immigrants is rare, partly due to the lack of workable data. The 2001 Census, for the first time since 1971, provides the users with two variables with the names of "POBF" and "POBM", which contain the information about the place of birth of the father and the mother respectively. With the help of these variables, we are able to identify the second-generation immigrants and use

other individual information in the census to carry out similar empirical study for their migration patterns as in Chapter 3.

The main purposes of this chapter are (1) to make a brief review of the literature on the adaptation of the second-generation immigrants to the host society, (2) to test whether it is true that a shift of the identity from the original ethnicity or nation to native Canadian means a step of acculturation and therefore can lead to the change of migration behavior of the second-generation immigrants, (3) to draw the attention of other researchers to the new opportunity given by the change in the 2001 census data for studying the second-generation issues in Canada.

The remaining part of this chapter is organized as follows. Section 5.2 reviews some important second-generation related theories. Section 5.3 introduces the data and the research methods used in empirical work. Section 5.4 shows the empirical results for the testing of the impact of identification assimilation on the mobility level of three typical ethnic groups in Canada, the British, German, and Italian. Section 5.5 makes a concluding discussion.

5.2 Literature Review

In their book "Legacies: the story of the immigrant second generation", Portes and Rumbaut (2001) came up with the idea that "selective acculturation" is the best path of adaptation into the host society for the children of the immigrants in the U.S.. By selective acculturation, they mean that while learning the language and culture of a new

country, the young generations of the minorities should also try to keep their old ones, and that instead of being ashamed of their ethnic origins, they should establish some sense of self-worth. Bilingualism, as the most visible aspect of the selective acculturation, is not only beneficial to the children themselves, who are proven to be more successful both at school and at work with the ability to communicate with others and to perceive the world with two different perspectives, but also important for the economy, which is more and more connected to countries of different cultural traditions due to the globalization process. And this kind of acculturation could only happen in a tolerant sociopolitical environment.

Portes and Rumbaut's argument is quite different from the current two mainstream ideologies about the attitude towards the immigrants, which they labelled as the "intransigent nativism" and the "forceful assimilationism" (2001, p.271). Both the nativists and assimilationists consider the preservation of any foreign ways as intolerable, and seek to make them disappear. For the nativists, nothing is more effective than the removal of the immigrants themselves, and they insist on stopping all or at least most of the immigration, sending existing illegal immigrants back as soon as possible, and reminding the remaining ones of their marginal and inferior status in the host country, while the less aggressive assimilationists suggest forcing the immigrants to merge into the mainstream rapidly at the cost of the surrender of the ethnic language and cultures.

Portes and Rumbaut blamed these two streams of ideas for their arbitrary

judgment of how threatening the immigrants could be to the society. Taking bilingualism as an example, a large second-generation sample shows that not only is the knowledge of English nearly universal, but preference for the English language is overwhelming, and the proportion of bilinguals becomes smaller and smaller through the time in the U.S. society. According to Portes and Rumbaut, the real question is not what we should do to prevent the on-going inflow of immigrants or their ethnic cultures from harming the unity of the country, but what we should do to protect the ethnic cultures and languages from totally disappearing. This point is supported by the work of Lieberson and Waters (1993). They found out that among the white population, a growing component is increasingly turning away from their immigrant ancestors in terms of the choices of identities.

The two ideologies were also criticized for their extreme insistence in clearing up all cultural dissidents, which could lead to a series of problems. On one side, some children of the black immigrants for instance, as Waters (1994) observed in her study for the New York City, give up their own ethnic identity and pick up the native black youths' behavioral pattern and their negative attitude towards school work, and hence suffer the discrimination that the mainstream whites have given to the real native blacks. In the end, they have no choice but to go through the downward path of assimilation into the local poor blacks. By contrast, those who adhere to their West Indian ethnic identities usually enjoy more chances and rewards for individual effort. Using Portes and Rumbaut's concept of parental control, the unfortunate assimilation of the second-generation black immigrants could be explained. As they gradually abandon their ethnic culture and

language, the youths lose the psychological connection with their parents, and thus the lack of parental control occurs and becomes a serious problem. With no adults telling them what is right and what is wrong, and if the ethnic community does not have a strong power to standardize their behavior as well, the immigrant children have to take their chance to choose the model to follow. If they are geographically close to the poor black communities in central urban areas, it is likely that they turn to real native blacks, given their dark-colored skin.

On the other side, what Portes and Rumbaut called the reactive ethnic effect takes place. In their study of the second-generation Mexican immigrants, Portes and Rumbaut noticed that some of the youths become extremely hostile to the mainstream society due to the constant pressure and discrimination they get from outside their ethnic community. When asked to self-identify themselves, they choose no kind of American identities but a strong unhyphenated national identity of their origin country. Among such children, performing well in school is considered to be a betrayal to the group, and consequently, many of them have to learn not to learn in order to stay loyal to the group, which make it even harder for them to ever be accepted by the mainstream groups.

The above arguments, not only give us some theoretical sense of the second-generation issues, but also guide us in a methodological way. As an additional implication, all the work shown above suggests that the behaviors of the second-generation immigrants should be studied at the group level. The distinctions among groups could be generated by the differences of ethnicity, and also by the differences in

how and to what extent subgroups have acculturated within an ethnic group. For instance, different self-identities of the youth with the same ethnic origin may lead to different types of outcomes in terms of performance at school. In our case, according to this assumption, a subgroup of the same self-identification within an ethnic group could, to some extent, be expected to have a similar level of mobility and thus the migration propensities could differ within one minority group due to the degree of acculturation. And this way of thinking will be used to guide the empirical work in the following sections.

5.3 Research Methods and the Data

To study whether a shift in identity from the original ethnicity or nationality to being Canadian can lead to an increase in the propensities to make interprovincial migration, a sample is taken from the full set of long-form records of the 2001 census. The sample includes all second-generation immigrants who satisfy the following conditions. First, both parents had the same country of birth so that children of international marriages are excluded. Second, the parents' country of birth is Britain, Germany, or Italy. These are the three ethnic groups who were shown in Chapter 3 to have different propensities to migrate and have large numbers of children born in Canada. Third, the age is between 20 and 49 so that the main reason for making long distance migration is likely to be related to labor market conditions.

For each second-generation immigrant, a dummy variable representing

acculturation is assigned the value of 1 if his/her self-reported ethnic origin is "Canadian". This variable is labeled "Acculturated".

The model for the empirical work to be performed here is the following binomial logit model:

$$P[i] = \frac{\exp(d + c' x[i])}{1 + \exp(d + c' x[i])}$$

where $P[i]$ is the probability that person i turns up to be an interprovincial migrant; $x[i]$ is a column-vector of observable explanatory variables, including age, education attainment, ethnic variables, provincial dummy variables and nativity; c' is a row-vector of unknown coefficients; and d is an unknown constant.

It is hypothesized that for each ethnic group, the acculturated second-generation immigrants are more prone to making interprovincial migration than their non-acculturated counterparts. This hypothesis is to be evaluated in the context of other influential explanatory factors, including age, educational attainment, province of residence, and previous migration experience.

5.4 Empirical Results

The estimation result of the best specification of the logit model is shown in Table 5.1. It has a relatively high Rho-square of 0.2734. Most of the estimated coefficients have substantively sensible signs.

The estimated coefficients show that among the non-acculturated individuals,

Germans are as prone to making interprovincial migration as the British, whereas Italians, with a coefficient of -0.58, are substantially less prone to doing so.

With respect to the hypothesis that for each ethnic group, the acculturated second-generation immigrants are more prone to making interprovincial migration than their non-acculturated counterparts, it is disappointing that the relevant estimated coefficients all turn out to be not significantly different from zero. The coefficients are slightly positive for the interaction terms "British * Acculturated" (0.11) and "German * Acculturated" (0.12). Interestingly, it turns out to be negative for the interaction term "Italian * Acculturated" (-0.46), which is nearly significant. In order to understand this puzzling finding, I made a further investigation of those who self-identified themselves as "Canadian" in the 2001 PUMF. It turns out that as many as 60% of them were residing in Quebec, which shared only about 24% of the total population of Canada. This extremely strong concentration of the self-identified "Canadians" suggests that the "Canadian" ethnic identity may not have the simple meaning of acculturation and hence is not suitable for testing my hypothesis.

It is worthwhile to report the findings about the effects of the control factors, because they are supportive of the main findings in the literature. For the age and education variables, clear patterns could still be seen as in Chapter 3. To be specific, in terms of age, people in their early 20s, show considerably high propensity to make interprovincial migration, and the tendency keeps going up for the age group of 25-29, with an estimated coefficient of 0.41. Since then, the mobility level drops and becomes

lower and lower as age grows, with a series of estimated coefficients of 0.09, -0.31, -0.65 and -0.93. With respect to education attainment, those with secondary level of schooling, though show a positive coefficient of 0.06, is not significantly more mobile than those with primary level of education, with a t-ratio of only 0.6. Post-secondary education seems to be an important push factor here. Those people with post-secondary level of schooling, with an estimated coefficient of 0.40, show a distinctly higher propensity to make interprovincial migrations. Thus, for the second-generation immigrants, the educational factors still play a remarkable role in the migration choices. Those with the top level of education are more likely to move than the rest.

When it comes the provincial dummy variables, the situation becomes much more complicated. As mentioned in Chapter 3, there is a general pattern over time that, the provinces with weak economies tend to have a high out-migration rate. Such tendency is still there for most of the so-called "have-not" provinces, except for PEI and Northwest Territories, which have positive (0.76, 0.30) but not significant estimated coefficients with the t-ratio of 1.4 and 1.3, respectively.

Among the three "have" provinces of Ontario, Alberta and B.C., Ontario shows the lowest out-migration rate. This might be partly due to its good economic performance during the 1996-2001 time period, as has been shown in Figure 4.1. Another possible reason for this could be the large population size of Ontario. With such a large population base, alternatives within the province could be enough for most of the people who try to move around to seek economic opportunities. Thus many people in Ontario will just

move within the province instead of move out to other provinces. For Alberta and B.C., during 1996-2001, Alberta was doing better than B.C. in general (Figure 4.1). If employment growth rate is used as a proxy for economy performance, Alberta should have relatively lower out-migration rate than B.C.. However, the actual results turn out to be the opposite. The estimated coefficient is 1.69 for Alberta with a big t-ratio of 15.5 and 0.05 for B.C. with a t-ratio of 0.8. That means B.C. has an out-migration rate similar to Ontario, while Alberta is significantly losing its population through out-migration. We could not explain the situations for these two provinces by the current research results because there are various factors that we have not investigated and controlled here. Factors such as immigration inflows, fluctuations in certain industries could affect the out-migration rate of a province besides employment growth rate.

Finally, with respect to the effects of previous migration experience and place of birth, the estimated coefficients show that the propensities to make interprovincial migration is by far the highest for non-natives (3.21) and the lowest for natives. Alberta has a retention power on the foreign-borns with an estimated coefficient of -1.93. Ontario also has such power on the foreign-borns, with an estimated coefficient of -0.52, however, the t-ratio (-0.6) turn out to be in significant. B.C., with its economic performance below the national average (Figure 4.1), shows an insignificant repulsive power on the foreign-borns with the estimated coefficient of 0.84. Finally, the highly significant negative coefficient of "Non-Native Borns * Alberta" (-1.93) suggests that the strong economy of

Table 5.1 Assessment of the Effects of Identity Acculturation of the Second Generation British, German and Italian on Interprovincial Migration Propensities: 1996-2001.

Explanatory Variable	Best Specification	
	Coef.	t-ratio
Constant	-4.93	-40.7
1.Age (Ref: Aged 20-24)		
Ref: Aged 20-24	----	----
Aged 25-29	0.41	4.3
Aged 30-34	0.09	0.9
Aged 35-39	-0.31	-3.2
Aged 40-44	-0.65	-6.6
Aged 45-49	-0.93	-8.0
2.Education (Ref: Primary)		
Ref: Primary	----	----
Secondary	0.06	0.6
Post-Secondary	0.40	4.9
3.Ethnicity (Ref: British)		
Ref: British * Non-Acculturated	----	----
German * Non-Acculturated	-0.02	-0.3
Italian * Non-Acculturated	-0.58	-8.6
British * Acculturated	0.11	0.9
German * Acculturated	0.12	0.5
Italian * Acculturated	-0.46	-1.9
4.Province (Ref: Ontario)		
Ref: Ontario	----	----
Newfl	2.18	6.9
PEI	0.76	1.4
Novasc	1.12	7.9
Newbr	1.32	6.4
Quebec	1.22	15.7
Manitoba	0.96	7.9
Saskatchwen	1.36	9.0
Alberta	1.69	15.5
British Columbia	0.05	0.8
Yukon	0.84	3.1
NWT	0.30	1.3
Nunavut	1.65	4.0
5.Experience Effect		
Non-Native Borns	3.21	50.3
Foreign Borns	1.56	3.5
Foreign Borns * Ontario	-0.52	-0.6
Foreign Borns * B.C.	0.84	1.1
Non-Native Borns * Alberta	-1.93	-14.2
Maximum Rho-square	0.2734	

Alberta in the late 1990s had strong negative effect on the out-migration of its non-natives.

5.5 Conclusion

From the long-form records of 2001 census, we have not gotten the expected result, which is that the more acculturated sub-groups should be more migratory than their co-ethnic counterparts. A closer examination of the data suggests that the self-identification as "Canadian" may not have the simple meaning of acculturation. Further research on this subject should pay greater attention to the proper specification of a proxy for acculturation.

Despite the disappointing finding about the effects of acculturation on the propensities to make interprovincial migration, my findings about the control factors have revealed valuable information about the migration behaviors of the second-generation immigrants. With respect to the effects of age, educational attainment, and previous migration experience, they are quite similar to other Canadians. In other words, their migration behaviors can be largely understood from the perspectives of the human capital investment theory and from the insights on repeat migrations obtained by previous migration researchers.

CHAPTER SIX

CONCLUDING DISCUSSION

The main purpose of this thesis has been to study the role of ethnicity and language acculturation in determining the propensities to make interprovincial migration in Canada in 1976-81, 1981-86, and 1996-2001 and to find out the major hidden casual relationships for the distinctions among the groups in the complex real-world context. The influence of identification acculturation on the second-generation immigrants' migration choices is also investigated for 1996-2001 time period. The empirical work is based mainly on the PUMFs (Public Use Microdata Files) of the 1981, 1986, and 2001 population censuses and on the long-form records of the 2001 census. The main findings of the work and some suggestions for further research are provided in the following part of this chapter.

6.1 The Methodological Finding

In attempting to reproduce the empirical findings of Trovato and Halli (1983 and 1990), interpretational mistakes in the multivariate analyses that depended on the widely used log linear models were found. The estimated parameters, which they used directly to draw the misleading conclusions that, for example, the Ukrainians are more mobile than

the hypothesis had expected, can not be interpreted in such a straightforward way. In order to interpret the estimation result properly, these parameters should be used to generate a set of odds ratios that is based on a well-defined reference group.

Despite the fact that their papers have been widely read and cited, no one has raised any questions about their mistakes until now. It seems that their method of interpretation is commonly used by other researchers who use the same kind of models. If this is true, there may be numerous misleading findings in the literature that must be reexamined.

6.2 Empirical Findings

6.2.1 The Ethnic and Language Acculturation Effect on Migration

With respect to the less complicated case of non-French minority ethnic group, the empirical data are found to be mostly supportive of the following two hypotheses.

H1: *The propensities to make interprovinal migration are lower for minority ethnic groups than for the mainstream ethnic group.*

H2: *The use of English as home language, which represents an important cultural shift towards the mainstream, increases the interprovincial migration propensities of minority ethnic groups.*

Thus, to the extent that interprovincial migration is a beneficial societal process that helps adjust labor supply to the changing labor demand in the Canadian spatial

economy, minority ethnic groups make smaller contributions than the mainstream ethnic group. However, this difference is in general reduced by language acculturation.

It is worth noting that H1 and H2 are very strongly supported by the Italian ethnic group, which is the least mobile group through the time. The Jewish ethnic group's lack of support for H2 is particularly interesting. This is the ethnic group that has succeeded in shifting towards the mainstream of the Canadian society while maintaining the vitality of its ethnic culture and identity. With plenty of opportunities for economic betterment and upward social mobility within their ethnic communities, many of the members of this ethnic group have the luxury of forsaking interprovincial migration as a useful means for advancement. The paradoxical combination of low geographical mobility and high socioeconomic achievement of the Jewish ethnic group is a worthy empirical case to keep in mind, especially when selective acculturation and multiculturalism are threatened by the rise of "intransigent nativism" and "forceful assimilationism" in North America (Portes and Rumbaut, 2001, p.271). The mode of assimilation and integration adopted by this ethnic group is what should be encouraged and emulated in a globalized world.

With respect to the more complicated case of the French ethnic group, the findings of this chapter are supportive of the following two hypotheses:

H3: *Among those residing outside Quebec, the propensities to make interprovincial migration are greater for the French ethnic group than for the mainstream ethnic group.*

H4: *This difference is greater for the French ethnic group that continues to use French as the home language than for the French ethnic group that has shifted the home language to English.*

Since a high proportion of the French out-migrants from the rest of Canada tend to select Quebec as their destination, this finding has confirmed the concern raised by Newbold (1996) and Liaw and Qi (2004) that the interprovincial migration process has the tendency to aggravate the spatial polarization of between the French and non-French populations in Canada. It is unfortunate that the support for H4 became successively stronger towards the late 1990s. Fortunately, this trend is countered by a mild narrowing of the extremely wide gap in the propensities to leave Quebec between the English-speaking British and the French-speaking French.

6.2.2 The Ethnic Niches

According to Waldinger's criteria of a qualified niche, construction industry is found to be a persistent niche for the Italians, and wholesale, finance/insurance/real estate, and health service industries, and educational service industry to some extent for the Jewish.

Italians are proved to have both wage and job security benefits from their niche in construction industry, while Jews tend to do better than their counterparts with other ethnic origins in wholesale, finance/insurance/real estate and educational service industries either in terms of wage or unemployment status. The theory of ethnic economic

niches is strongly supported by the Italian case, and moderately supported by the Jewish case.

With the economic niches providing their ethnic workers better-paid and more secure jobs, the two ethnic groups gain strong power in holding their members within the community. From the individual's point of view, the economic benefits of ethnic economic niches tend to reduce the incentive to take the risk of making interprovincial migration. Thus, these two groups turn out to be the least migratory non-French ethnic groups in all three periods.

6.2.3 The Identification Acculturation of the Second-generation Immigrants

From the long-form records of 2001 census, we have not gotten the expected result, which is that the more acculturated sub-groups should be more migratory than their co-ethnic counterparts. A closer examination of the data suggests that the self-identification as "Canadian" may not have the simple meaning of acculturation. Further research on this subject should pay greater attention to the proper specification of a proxy for acculturation.

Despite the disappointing finding about the effects of acculturation on the propensities to make interprovincial migration, my findings about the control factors have revealed valuable information about the migration behaviors of the second-generation immigrants. With respect to the effects of age, educational attainment, and previous migration experience, they are quite similar to other Canadians. In other words, their

migration behaviors can be largely understood from the perspectives of the human capital investment theory and from the insights on repeat migrations obtained by previous migration researchers.

6.3 Suggestions for Future Studies

With respect to the study of ethnic influences on migration, it would be interesting and meaningful to see what is the situation for the increasingly large ethnic groups from non-European sources. Being non-Europeans, are these ethnic groups more subject to the influence of ethnic communities in their propensities to make interprovincial migration? Assuming the acquisition of the ability to use English language and the attainment of better education as a form of assimilation to the mainstream society, whether and to what extent are English language ability and educational attainment affecting the interprovincial migration propensities of these non-European ethnic groups?

Another possible field for ethnicity-migration study is the second-generation immigrant issues. With the new opportunity given by the adding of the "POBF" and "POBM" variables in the long-form records of 2001 census, the verification of the second generation becomes possible. Plenty of information in the census, thus, could be used to carry out empirical work in various aspects. How can meaningful proxies for the acculturation of the second-generation immigrants be created? Are those more acculturated people more similar to the mainstream? Is this kind of acculturation playing any role in migration? What is a better way to divide ethnic subgroups?

For the application of ethnic economic niche theory, the variables selected to test the benefits that the ethnic members could get from a niche might not be proper enough yet in this thesis. How to represent the advantages of a niche, such as job security, learning system, that have been verbally described in the theory, in a quantitative way? Well, that could be a topic for future research as well.

Hopefully, the findings of this thesis would serve as a useful guide for future studies.

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APPENDIX A

DISTRIBUTION OF ETHNICITIES AND INTERPROVINCIAL MIGRATION PROPENSITIY OF EACH ETHNICITY IN EACH PROVINCE IN CANADA

Table A.1 Distribution of Ethnicities in 1976, Based on the 1981 Census.

	Nfld	P. E. I.	N. S.	N. B.	Quebec	Ontario	Mani.	Sask.	Alberta	B. C.	Canada
British	4.87	1.11	6.19	3.76	6.24	47.58	4.08	3.72	8.42	14.04	100.00
French	0.25	0.30	1.24	3.61	79.25	10.61	1.18	0.68	1.44	1.43	99.99
German	0.09	0.29	3.00	0.62	3.76	34.88	9.33	13.90	18.47	15.67	100.01
Italian	0.08	0.06	0.40	0.27	22.51	64.66	1.31	0.34	3.30	7.07	100.00
Jewish	0.16	0.08	0.93	0.29	37.95	46.90	6.26	0.64	2.42	4.37	100.00
Ukrainian	0.01	0.32	0.39	0.21	3.26	26.69	19.71	14.07	23.74	11.60	100.00
Other	0.47	0.90	2.29	1.08	9.64	43.76	6.63	5.82	12.24	17.17	100.00
All	2.18	0.73	3.52	2.8	27.71	36.04	4.37	3.92	7.9	10.83	100.00

Note: P.E.I. includes Prince Edward Island, Yukon and NWT.

Table A.2 Distribution of Ethnicities in 1981, Based on the 1986 Census.

	Nfld	P. E. I.	N. S.	N. B.	Quebec	Ontario	Mani.	Sask.	Alberta	B. C.	Canada
British	4.27	1.07	5.86	3.53	5.82	46.01	4.05	3.96	10.61	14.83	100.01
French	0.17	0.24	0.98	3.57	79.10	10.16	1.21	0.88	1.96	1.74	100.01
German	0.17	0.27	2.28	0.42	3.24	32.35	9.65	14.33	19.87	17.42	100.00
Italian	0.01	0.01	0.05	0.01	23.56	64.60	1.16	0.24	3.33	7.04	100.01
Jewish	0.00	0.03	0.08	0.06	35.00	50.11	5.89	0.50	3.67	4.66	100.00
Ukrainian	0.01	0.04	0.06	0.01	3.12	26.82	18.91	14.03	25.17	11.83	100.00
Other	0.23	1.02	1.53	0.55	10.35	43.59	6.72	5.43	13.26	17.33	100.01
All	2.14	0.74	3.41	2.75	26.68	35.75	4.16	3.85	9.09	11.41	99.98

Note: P.E.I. includes Prince Edward Island, Yukon and NWT.

Table A.3 Distribution of Ethnicities in 1996, Based on the 2001 Census.

	Nfld	P.E.I.	N. S.	N. B.	Queb	ON	Mani.	Sask.	AB	B. C.	Yuk	NWT	Nunav	Canada
British	3.01	0.83	5.08	3.14	5.67	44.84	4.03	3.82	11.48	17.79	0.14	0.12	0.03	100.00
French	0.33	0.38	1.94	4.30	62.54	17.90	2.41	1.74	4.30	4.03	0.06	0.06	0.01	100.00
German	0.15	0.07	2.39	0.50	3.21	32.52	9.83	12.18	20.50	18.40	0.13	0.10	0.01	100.00
Italian	0.04	0.02	0.30	0.15	22.45	65.75	1.09	0.24	3.21	6.73	0.01	0.01	0.00	100.00
Jewish	0.05	0.01	0.65	0.29	28.81	55.72	5.15	0.29	3.11	5.89	0.01	0.00	0.00	100.00
Ukrainian	0.06	0.02	0.36	0.11	2.65	26.34	17.64	13.09	26.70	12.82	0.11	0.09	0.01	100.00
All	2.02	0.62	3.84	2.97	18.68	39.29	4.19	3.82	10.28	14.04	0.11	0.10	0.03	100.00

Note: The row "All" here refers to the sum of the six ethnic groups.

Table A.4 Interprovincial Migration propensity of Each Ethnicity

in Each Province during 1976-81(%).

	Nfld	P. E. I.	N. S.	N. B.	Quebec	Ontario	Mani.	Sask.	Alberta	B. C.	Canada
British	6.52	14.43	8.07	8.58	15.78	4.27	11.36	9.28	9.39	5.16	6.64
French	----	14.39	9.70	5.57	1.15	7.20	9.79	9.55	11.77	9.27	2.56
German	----	45.83	4.19	16.50	13.24	4.20	9.25	6.34	6.59	5.93	6.26
Italian	----	----	7.32	----	1.84	1.19	5.26	8.57	4.48	2.79	1.76
Jewish	----	----	11.43	----	7.65	1.70	5.11	----	12.09	4.88	4.95
Ukrainian	----	----	9.38	----	13.81	4.38	6.36	6.92	4.56	7.14	6.04
Other	20.86	18.56	11.80	14.29	10.70	4.69	10.55	8.93	8.26	5.48	6.94
All	7.40	16.57	8.52	8.13	3.38	4.38	10.03	8.46	8.40	5.47	5.36

Note:

1. Migration propensity is measured by the percentage of people who made interprovincial migration within each ethnic group in an individual province (or in Canada as a whole) during 1976-1981. e.g. The first figure of 6.25 means during 1976-81, those British who were in Newfoundland and made interprovincial migration account for 6.25% of Newfoundland's 1976 British population.
2. Figures for ethnicities with an at-risk population being smaller than 30 in certain province are not listed in the table.

Table A.5 Interprovincial Migration propensity of Each Ethnicity

in Each Province during 1981-86(%).

	Nfld	P. E. I.	N. S.	N. B.	Quebec	Ontario	Mani.	Sask.	Alberta	B. C.	Canada
British	6.66	14.01	5.81	6.69	9.80	2.42	7.78	7.50	11.86	5.46	5.37
French	13.29	15.11	6.64	4.09	0.97	5.11	7.13	8.96	15.80	11.61	2.23
German	----	40.00	3.90	19.67	5.91	1.69	3.47	4.53	6.43	5.38	4.25
Italian	----	----	----	----	1.27	0.53	4.84	----	6.18	1.72	1.11
Jewish	----	----	----	----	4.97	1.12	2.86	----	13.74	7.23	3.62
Ukrainian	----	----	----	----	5.38	1.56	3.99	4.19	4.67	4.37	3.75
Other	20.51	9.81	8.09	11.15	5.40	1.99	5.34	5.74	7.59	4.49	4.20
All	7.08	13.83	6.07	6.04	2.25	2.38	6.27	6.53	10.19	5.40	4.13

Note:

1. Migration propensity is measured by the percentage of people who made interprovincial migration within each ethnic group in an individual province (or in Canada as a whole) during 1981-1986.
2. Figures for ethnicities with an at-risk population being smaller than 30 in certain province are not listed in the table.

Table A.6 Interprovincial Migration propensity of Each Ethnicity

in Each Province during 1996-2001(%).

	Nfld	P.E.I.	N. S.	N. B.	Queb	ON	Mani.	Sask.	AB	B.C.	Yuk	NWT	Nunav	Canada
British	9.52	6.35	6.94	7.03	6.62	2.25	6.96	8.70	5.62	5.36	24.67	36.68	41.80	4.60
French	14.08	7.05	6.55	5.08	1.23	3.31	5.56	8.34	6.05	8.62	31.16	32.33	43.08	2.71
German	27.12	21.18	4.69	10.02	5.74	1.70	3.98	4.66	2.97	4.31	21.12	44.07	46.15	3.39
Italian	31.91	19.05	8.42	10.22	1.40	0.39	3.75	9.66	2.67	2.14	42.86	12.50	----	0.93
Jewish	30.77	----	13.14	10.13	3.75	0.99	3.99	21.52	4.19	7.15	----	----	----	2.59
Ukrainian	66.67	25.00	10.73	27.87	6.19	1.76	3.14	4.32	2.40	5.22	33.85	38.00	71.43	3.25
All	9.82	6.56	6.85	6.49	2.40	2.13	5.92	7.62	5.11	5.41	25.40	36.29	42.43	3.88

Note:

1. The column "Canada" here refers to the integer of the six ethnic groups.
2. Migration propensity is measured by the percentage of people who made interprovincial migration within each ethnic group in an individual province (or in Canada as a whole) during 1996-2001.
3. Figures for ethnicities with an at-risk population being smaller than 30 in certain province are not listed in the table.

APPENDIX B

EDUCATIONAL EFFECT ON MIGRATION PROPENSITY OF ETHNICITIES IN CANADA

Using the same binomial logit model as in Chapter 3, the following appendix investigates the influences of educational attainment of different ethnic groups on their interprovincial migration patterns for 2001 census. In general, the better-educated people in each ethnic group are expected to show higher mobility level than their co-ethnic counterparts with less education.

The estimated results are shown in Table B.1.

With respect to the educational effect, the estimated results for the set of education variables itself (0.06 for secondary and 0.30 for post-secondary education), suggest that ignoring the effects of ethnicity, as educational level goes up, people's propensity to make interprovincial migration increases, which is exactly what is expected.

Within each ethnicity group, the estimated results are supportive for my hypothesis about the educational effect on interprovincial migration, except for the Jewish group. What deserves some words here is that in order to assess educational effects for each individual group, the estimated coefficients for the variable of secondary education and the interaction terms between ethnicity and secondary education should be

combined, while the estimated coefficients for the variable of post-secondary education and the interaction terms between ethnicity and post-secondary education should be combined as well.

For each of the French, German, Italian and Ukrainian ethnic groups, people with post-secondary level of education are most likely to move, while those with primary level of education are most likely to stay. The combined estimated coefficients are 0.30 for secondary education and 0.41 for post-secondary education for the French, 0.47 for secondary education and 0.67 for post-secondary education for the Germans, 0.79 for secondary education and 1.13 for post-secondary education for the Italians, and 0.24 for secondary education and 0.52 for post-secondary education for the Ukrainians. All the estimated coefficients used here are statistically significant.

With respect to the Jews, there are some abnormal findings. Those Jews with primary level of education are not significantly different from the better-educated groups with respect to the propensities to make interprovincial migration. There is even a slight reversal trend between Jews with primary level of education and secondary level of education. The combined estimated coefficients are -0.29 for secondary education and 0.17 for post-secondary education. All the estimated coefficients for the interaction terms here are not statistically significant. One possible explanation for this finding might be the Jews' concentration in several upper level industries. As discussed in Chapter 4, the Jews form their ethnic economic niches in industries such as educational service and health service. Those niches require the employees to have relatively higher educational

Table B.1 Assessment of Educational Effect on Interprovincial Migration: 1996-2001.

Explanatory Variable	Best Specification		-Edu Related Effect		-Eth*Edu Effect		-Education		-Age		-Geo Related Effect		-Experience Effect	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	-4.05	-241.3	-3.90	-288.0	-4.10	-254.8	-3.90	-287.6	-5.13	-373.0	-3.45	-234.7	-3.34	-222.5
1.Age (Ref: Aged 20-24)														
Ref: Aged 20-24	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Aged 25-29	0.17	12.2	0.23	16.8	0.17	12.2	0.22	15.9	----	----	0.13	10.1	0.28	22.1
Aged 30-34	-0.26	-18.4	-0.19	-13.9	-0.26	-18.4	-0.21	-14.9	----	----	-0.32	-23.1	-0.06	-4.7
Aged 35-39	-0.68	-47.1	-0.62	-43.4	-0.68	-47.0	-0.63	-44.2	----	----	-0.75	-53.3	-0.43	-32.2
Aged 40-44	-1.00	-66.3	-0.95	-63.5	-1.00	-66.2	-0.96	-64.0	----	----	-1.08	-73.1	-0.73	-51.8
Aged 45-49	-1.28	-79.2	-1.23	-76.8	-1.28	-79.2	-1.24	-77.1	----	----	-1.37	-85.7	-0.99	-64.6
Aged 50-54	-1.45	-84.1	-1.41	-82.4	-1.45	-84.2	-1.41	-82.4	----	----	-1.54	-90.4	-1.13	-69.0
Aged 55-59	-1.57	-80.4	-1.54	-79.7	-1.57	-80.4	-1.54	-79.3	----	----	-1.66	-86.0	-1.21	-64.6
Aged 60-64	-1.69	-74.8	-1.70	-75.6	-1.69	-74.9	-1.68	-74.6	----	----	-1.79	-80.0	-1.32	-60.4
Aged 65-69	-1.76	-71.2	-1.79	-73.2	-1.76	-71.4	-1.76	-71.6	----	----	-1.87	-76.4	-1.37	-57.4
Aged 70-74	-2.01	-70.3	-2.06	-72.7	-2.02	-70.5	-2.02	-71.1	----	----	-2.13	-75.0	-1.62	-58.0
Aged 75_	-2.05	-87.0	-2.12	-91.3	-2.06	-87.2	-2.08	-89.0	----	----	-2.15	-91.8	-1.63	-71.3
2.Education (Ref: Primary)														
Ref: Primary	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Secondary	0.06	4.0	----	----	0.12	10.2	----	----	0.46	34.8	0.02	1.4	0.13	9.6
Post-Secondary	0.30	25.7	----	----	0.37	36.3	----	----	0.61	53.7	0.30	25.7	0.46	40.5
Ethnic Effect														
3.Ethnicity (Ref: British)														
Ref: British	----	----	----	----	----	----	----	----	----	----	----	----	----	----
French * Quebec	-1.12	-36.1	-1.02	-46.7	-1.02	-46.6	-1.31	-44.2	-1.18	-39.0			-1.58	-53.1
French * Non-Quebec	-0.03	-1.4	0.04	3.0	0.06	5.0	-0.22	-10.0	-0.04	-1.9	-0.25	-10.8	0.03	1.4
German	-0.46	-14.0	-0.23	-13.4	-0.18	-10.8	-0.65	-20.3	-0.48	-14.7	-0.32	-9.7	-0.57	-17.8
Italian	-1.65	-20.6	-1.04	-33.2	-1.00	-31.9	-1.84	-23.1	-1.72	-21.5	-1.72	-21.6	-1.63	-20.6
Jewish	-0.30	-2.5	-0.41	-9.9	-0.45	-10.8	-0.48	-3.9	-0.54	-4.4	-0.21	-1.7	-0.21	-1.7
Ukrainian	-0.31	-6.0	-0.15	-6.2	-0.14	-5.6	-0.48	-9.4	-0.67	-13.3	-0.26	-5.1	-0.31	-6.1
Educational Effect														
4.Ethnicity * Education														
French * Secondary	0.14	4.3	----	----	----	----	0.19	6.6	0.14	4.3	0.14	4.5	0.15	5.0
German * Secondary	0.41	8.0	----	----	----	----	0.46	9.3	0.34	6.7	0.29	5.6	0.43	8.6
Italian * Secondary	0.73	7.0	----	----	----	----	0.77	7.5	0.85	8.3	0.71	6.9	0.36	3.5
Jewish * Secondary	-0.35	-2.1	----	----	----	----	-0.30	-1.8	-0.35	-2.2	-0.43	-2.6	-0.37	-2.3
Ukrainian * Secondary	0.18	2.4	----	----	----	----	0.22	2.9	0.27	3.7	0.20	2.6	0.16	2.2
French * Post-secondary	0.11	4.1	----	----	----	----	0.40	16.5	0.19	7.3	0.06	2.4	0.10	3.9
German * Post-secondary	0.37	9.4	----	----	----	----	0.67	17.4	0.28	7.0	0.23	5.7	0.38	9.8
Italian * Post-secondary	0.83	9.4	----	----	----	----	1.12	12.8	1.11	12.6	0.80	9.1	0.37	4.2
Jewish * Post- secondary	-0.13	-1.0	----	----	----	----	0.15	1.2	0.10	0.8	-0.27	-2.1	-0.11	-0.9
Ukrainian * Post-secondary	0.22	3.7	----	----	----	----	0.51	8.5	0.37	6.2	0.19	3.2	0.15	2.6

Table B.1 Assessment of Educational Effect on Interprovincial Migration: 1996-2001 (continued).

Explanatory	Best Specification		-Edu Related Effect		-Eth*Edu Effect		-Education		-Age		-Geo Related Effect		-Experience Effect	
Variable	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
5.Time of assimilation														
Ref: immigrated before 1991	----	----	----	----	----	----	----	----	----	----	----	----	----	----
immigrated during 1991-95	-0.05	-1.2	-0.04	-0.9	-0.04	-1.0	-0.06	-1.3	0.52	11.8	-0.05	-1.2	0.14	3.3
Geographic Effect														
6.Province (Ref: Ontario)														
Ref: Ontario	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Newfl	1.68	84.6	1.68	84.6	1.68	84.5	1.68	84.9	1.86	99.1	----	----	1.55	90.2
PEI	0.79	20.6	0.78	20.6	0.78	20.5	0.79	20.7	0.92	24.9	----	----	1.09	31.2
Novasc	0.91	54.5	0.91	55.0	0.91	54.4	0.91	55.0	1.00	62.1	----	----	1.18	78.1
Newbr	0.88	45.9	0.87	45.6	0.88	45.9	0.87	45.8	0.99	53.4	----	----	1.05	59.8
Quebec	0.98	59.1	0.98	59.2	0.98	58.9	0.98	59.4	1.04	63.9	----	----	0.91	60.0
Manitoba	0.81	48.0	0.78	46.8	0.80	47.8	0.80	47.5	0.89	54.4	----	----	1.00	64.6
Saskatchwen	1.04	62.8	1.01	61.4	1.03	62.5	1.03	62.4	1.16	72.5	----	----	1.24	82.5
Alberta	1.07	59.5	1.06	58.7	1.07	59.3	1.07	59.3	1.25	69.6	----	----	0.80	67.0
British Columbia	0.27	22.5	0.26	21.7	0.27	22.6	0.26	22.0	0.22	18.3	----	----	0.97	89.8
Yukon	0.73	16.8	0.73	16.9	0.73	16.8	0.73	16.8	0.71	16.6	----	----	1.95	46.5
NWT	0.23	6.2	0.23	6.2	0.23	6.2	0.23	6.2	0.34	9.2	----	----	1.52	41.9
Nunavut	0.84	13.4	0.84	13.3	0.84	13.4	0.84	13.4	1.05	17.1	----	----	1.98	33.4
7.Experience Effect														
Non-Native Borns	2.69	289.1	2.70	291.3	2.69	289.0	2.70	290.8	2.57	280.8	2.50	302.8	----	----
Foreign Borns	1.44	73.6	1.45	74.7	1.43	73.2	1.46	74.6	0.91	47.8	1.21	82.6	----	----
Foreign Borns * Ontario	-0.42	-13.7	-0.43	-14.2	-0.42	-13.8	-0.43	-14.0	-0.33	-11.0	----	----	----	----
Foreign Borns * B.C.	0.09	2.6	0.11	3.3	0.09	2.9	0.09	2.8	0.18	5.6	----	----	----	----
Non-Native Borns * Alberta	-1.39	-64.6	-1.39	-64.7	-1.38	-64.5	-1.39	-65.0	-1.47	-69.2	----	----	----	----
Maximum Rho-square	0.2280		0.2255		0.2277		0.2267		0.1820		0.2014		0.0959	
Marginal Contribution in Rho-square	------		0.0025		0.0003		0.0013		0.0460		0.0265		0.1321	
Fixed Rho-square	0.2280		0.2246		0.2267		0.2261		0.1772		0.2000		0.0785	
Marginal Contribution in Rho-square	------		0.0033		0.0012		0.0018		0.0507		0.0280		0.1494	

levels or certain kind of special trainings. As a result of this concentration pattern, in order to be qualified as members of the niches, people of Jewish origin have to be well educated. Those with poor education then have to move for better chances, while the better-educated Jews could settle down within their own ethnic economic niches without moving to other provinces.

What also deserves some words here is the results for other controlling factors. In general, there is not much change from the previous results we get for 2001 census in Chpater 3, in terms of the estimated coefficients for age, education, ethnicity, time of immigration, nativity status and provincial dummy variables in the best model except for the three Quebec and French related variables. Compared to the results for the study of ethnic and language acculturation effect in Chapter 3, the Quebec dummy variable starts to have a positive estimated coefficient of 0.98, which implies that people in Quebec as a whole, have stronger tendency to move out of the province than the reference groups of people in Ontario. Meanwhile, French people in Quebec show a strong preference to stay within Quebec with an estimated coefficient of -1.12. Regardless of education related factors for now, a table named B.2 is created, where we can get a sequence of mobility levels among the ethnic groups in Quebec and non-Quebec provinces separately. As we can see here, both of the rankings are reasonable. In Quebec, from the most to the least mobile group, the ranking is British, Jewish, Ukrainian, German, French and Italian, with the estimated coefficients of 0.98, 0.68, 0.67, 0.52, -0.14 and -0.67 respectively. In non--Quebec provinces, the ranking is German, British, French, Jewish, Ukrainian and Italian,

Table B.2 The Effects of Ethnicity and Quebec on Interprovincial Migration Propensities.

Explanatory Variable	**British**	**French**	**German**	**Italian**	**Jewish**	**Ukrainian**
	Estimated Coefficients:					
	In Quebec					
	Migration Period: 1996-2001					
French * Quebec	0.00	-1.12	0.00	0.00	0.00	0.00
French * Non-Quebec	0.00	0.00	0.00	0.00	0.00	0.00
Quebec	0.98	0.98	0.98	0.98	0.98	0.98
German	0.00	0.00	-0.46	0.00	0.00	0.00
Italian	0.00	0.00	0.00	-1.65	0.00	0.00
Jewish	0.00	0.00	0.00	0.00	-0.30	0.00
Ukrainian	0.00	0.00	0.00	0.00	0.00	-0.31
Total	0.98	-0.14	0.52	-0.67	0.68	0.67
Odds Ratio:						
__Ref.: British in Quebec	1.00	0.33	0.63	0.19	0.74	0.74
__Ref.: British in Non-Quebec	2.66	0.87	1.68	0.51	1.98	1.96
	Not In Quebec					
French * Quebec	0.00	0.00	0.00	0.00	0.00	0.00
French * Non-Quebec	0.00	-0.03	0.62	0.00	0.00	0.00
Quebec	0.00	0.00	0.00	0.00	0.00	0.00
German	0.00	0.00	-0.46	0.00	0.00	0.00
Italian	0.00	0.00	0.00	-1.65	0.00	0.00
Jewish	0.00	0.00	0.00	0.00	-0.30	0.00
Ukrainian	0.00	0.00	0.00	0.00	0.00	-0.31
Total	0.00	-0.03	0.16	-1.65	-0.30	-0.31
Odds Ratio:						
__Ref.: British in Quebec	0.38	0.36	0.44	0.07	0.28	0.28
__Ref.: British in Non-Quebec	1.00	0.97	1.17	0.19	0.74	0.74

with the coefficients of 0.16, 0.00, -0.03, -0.30, -0.31 and -1.65 respectively.

APPENDIX C

GERMANS AND UKRAINIANS IN AGRICULTURE

Here, as shown in Table C.1, in the niche of agriculture industry, Germans and Ukrainians have persistently gained a negative income "advantage", which challenges Waldinger's theory. To be specific, for Germans, their income disadvantage is $555 in 1981, $818 in 1986 and $5,406 in 2001, and the disadvantage is significant for the 2001 census year. For the Ukrainians, their income disadvantage is $3,680 in 1981, $2,901 in 1986 and $2,174 in 2001, and for the two censuses of 1981 and 1986 the disadvantage is statistically significant.

In terms of unemployment status, for Germans, the estimated coefficients are -1.47, -0.88 and -2.09, which imply that the Germans have gained some kind of job security from their niche. The problem is that the result is only statistically significant for the 2001 census. For the Ukrainians, for 1981 and 1986 census, two cases of complete separation occur, showing a support for Waldinger's theory. However, when it comes to the 2001 census, the estimated coefficient (-0.48), though still shows a right negative sign, is no longer statistically significant.

It seems that as a niche, agriculture industry could more or less provide Germans and Ukrainians with some extent of job security. However, none of them could get better

Table C.1 Estimation Results of a Regression Model for Wage and a Logit Model for Unemployment Rate in Agriculture Industry: German and Ukrainian Males versus Other Males.

Explanatory Variable	1981				1986				2001			
	Wage		Unemployment		Wage		Unemployment		Wage		Unemployment	
	Best Specification		Best Specification		Best Specification		Best Specification		Best Specification		Best Specification	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Constant	7251	10.0	-3.22	-10.0	7982	9.2	-2.66	-10.5	17789	12.0	-3.05	-11.2
German	-555	-0.9	-1.47	-1.4	-818	-1.1	-0.88	-1.7	-5406	-4.7	-2.09	-2.1
Ukrainian	-3680	-3.9	-∞	----	-2901	-2.3	-∞	----	-2174	-1.1	-0.48	-0.5
Secondary	643	1.0	-0.56	-1.5	2622	3.6	-0.57	-2.1	2123	2.3	-0.34	-1.8
Post-Sec	2174	4.0	-0.22	-0.7	4621	7.4	-0.52	-2.2	6405	7.8	-0.80	-4.0
Aged 25-34	4043	5.4	-0.76	-2.5	6080	7.0	-0.80	-3.4	10107	6.4	-0.44	-1.9
Aged 35-44	8459	10.9	-1.75	-4.1	9241	10.2	-0.93	-3.6	14026	9.6	-0.98	-4.1
Aged 45-54	9340	12.1	-2.58	-4.2	10874	11.8	-1.74	-5.0	14083	9.5	-1.06	-4.2
Aged 55-64	7992	10.3	-2.24	-4.1	11182	12.1	-2.56	-5.3	14728	9.7	-1.08	-3.9
Aged 65-74	6717	7.2	-1.81	-2.9	13319	12.8	-∞	----	17540	10.8	-3.57	-3.5
Aged 75_	2772	1.9	-∞	----	12183	7.5	-∞	----	16957	8.2	-∞	----
Atlantic	-2876	-2.8	1.00	2.4	-2455	-2.0	1.31	4.5	----	----	----	----
Quebec	-1181	-1.8	0.92	2.9	523	0.7	0.50	1.9	-3557	-3.3	1.18	5.0
Manitoba	-1563	-2.0	-0.79	-1.0	-2174	-2.3	-1.53	-2.1	-7953	-6.0	-0.07	-0.2
Saskatchwen	3706	6.0	-1.54	-2.0	1597	2.2	-1.33	-2.7	-6178	-5.9	-0.69	-1.6
Alberta	2411	3.7	-0.93	-1.5	406	0.5	-0.50	-1.4	-3403	-3.2	-0.57	-1.4
B.C.	1529	1.6	-0.42	-0.6	-2496	-2.2	0.86	2.5	-3693	-2.6	0.85	3.3
Adj R-Sq /Rho-Sq	0.0506		0.1575		0.0628		0.1567		0.1280		0.1094	
No. of Obs.	6453				6697				8376			

Note: The numbers of observations for the groups of age 75 and older for the three censuses are 146, 185 and 312 respectively and 342 and 274 for Ukrainian for 1981 and 1986 census respectively and 704 for age group 65-74 for 1986 census.

income, and actually, they are even doing worse than average.

There is one possible explanation for this problem, the settlement history of the minority groups in Canada. Luciuk and Hryniuk (1991) edited a book with a paper telling the story of the first wave immigrant Ukrainians. They came to western Canada with limited financial resource and there was rarely any government support from the host country. They chose the wooded land rather than the more fertile prairie land so that they could make use of the timber for building, fuel and fencing, marsh grass for roofing as they used to do in Ukraine. At that time, it was a wise choice for the poor Ukrainians to live near the abundant free materials, but now, it could also be the reason for their failure in terms of income in agriculture industry. For the Germans, though no support from the literature, they might have the same kind of disadvantage with respect to the choosing of the farming land, since the British could have already taken the best land in western Canada. Although the two ethnic groups may not have the most productive land, because of the long farming tradition of their own culture, they may still prefer to stay within the industry, which lead to the over representation of them in agriculture industry.

Another interesting thing here is that for 1981 and 1986 census, from the wage aspect, the Germans were doing much better than the Ukrainians, but for 2001 census, the situation reverses. This might have something to do with the characteristics of the industry itself. Agricultural income tends to fluctuate according to the change of natural conditions and global market prices. Besides, the natural disasters as floods and droughts could occur regionally or to different sub-sector of the whole industry, and the changes of

prices might happen to diverse products, which could make the income of people in agriculture industry vary a lot. For instance, the mad cow disease is a fatal strike to the cattle-raising sector, while it may have little negative effect or maybe even slightly positive effect on the pig-raising sector. Following this idea, future work could be done to get a better sense of the distribution of Germans and Ukrainians in the agriculture sub-sectors.

In all, the unexpected results could be partly due to the uniqueness of agriculture industry itself, and partly as a result of complex settlement history and the tradition of the two groups. We can not simply say that Waldinger's theory is not true before further investigations are done.

There is one more phenomenon that worth mentioning here. Why does the niche for Germans in agriculture expand in terms of the degree of concentration, given it is such a disadvantaged "niche" for them? That could be something interesting for further study as well.