Education, Earnings, and Employment: An investigation of Immigrants in Canadian cities

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Abstract

Despite the increasing levels of education possessed by recent immigrants to Canada, the incomes and employment status of newcomers is declining. While there exists a significant body of research that tracks this decline, few focus on immigrants living outside the 'traditional' migrant communities of Montreal, Toronto, and Vancouver. This thesis uses data from the 2002 Ethnic Diversity Survey to investigate earnings and employment chances of immigrants and non-immigrants based upon educational achievement throughout Canada. This study divides Canada into four tiers based on the number of immigrants received in order to assess the economic outcomes of the two groups. Economic outcome is judged through the lens of social capital framework and human capital theory to evaluate the influence of social networks and individual accomplishments. Results of the regressions analyses indicate that those who are Canadian-born have stronger returns to education in all but the 3rd-tier though the differences appear to be relatively minimal. Specifically, among foreign-born migrants, living in the 3rd-tier coincides with better earning returns to education while schooling is only important for employment for those residing in 1st-tier centres. Additionally, the influence of social networks is negligible regardless of nativity status. Despite lesser returns to education, immigrants appear to earn more than their native-born counterparts based upon occupation, though the results for employment suggest that reaching this point may be more difficult than for those Canadian-born. Lastly, there seems to be economic opportunities for immigrants outside of the 1st-tier leading to better monetary outcomes. The findings of this project contribute to current immigration literature in Canada and hold implications for the Canadian immigration policy.

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To my family, I love you and thank you for always keeping me grounded yet supporting me in all my endeavours.

To Justine, you have been and will continue to be my rock. I love you.

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Chapter One: Introduction

Immigration has been an integral part of the Canadian demographic for the past 300 years. It has been transformed from a racially-biased (pre-1967) policy into a well-respected modern-day evaluation process. Immigration to Canada contributes to ethnic and religious diversity, labour and economic growth and the multicultural aspect of Canadian society while consistently reporting among the highest per capita immigration rates in the world. Consequently, Canada has become one of the worldwide leaders in the settlement, integration and research of international migrants. As Reitz (2010:1) points out, "Canada's immigration program has enjoyed remarkable public support and is regarded as a success by international standards."

Immigration serves a number of purposes in Canada. Not only does it contribute to the overall diversity of the country, it allows for reunification of families and friends, provides a safe sanctuary for those displaced or seeking humanitarian asylum, and presents opportunities to start anew. Most importantly, immigration supplies a continual source of skilled labour to Canada's economy in terms of its economic and labour power investments. The value of immigrants to the economic institutions of our society cannot be overstated.

Due to a declining birth rate and a sparse population spread throughout a large geographic area, acute labour shortages are not an uncommon occurrence in Canada (Wallace 2002). Since the birth of the immigration era, immigrants have represented a way to fill the gap between the needs of employers for skilled and unskilled workers and the dearth of Canadian-born persons to fill these positions. This imperative is seen in the way Canada organizes its migration system. The Economic Class, which includes the Federal Skilled Worker Class and the Provincial Nominee Class, comprises the most

numerous categories of labour market entry. On a yearly basis since 1995, at least 50% of immigrants admitted entrance into Canada fall under this class (Citizenship and Immigration Canada 2009). In 2009, this value reached 64.1%, marking the highest proportion since 2002 (CIC 2009). The Economic Class consists of professionally trained and educated workers who are expected to contribute to the economy as a basis for their entry. Immigrants entering in this category are selected based upon "essential and transferable skills that contribute to success and adaptability in the Canadian labour market" (CIC 2010) using a points-based system of entry. Under the points system, newcomers in this class are chosen for entrance using a wide variety of criteria. These criteria consider level of education, previous work experience, knowledge of English and/or French, age, arranged employment, and adaptability. Among other things, this has contributed to an increasingly well educated group of newcomers but has not yielded in economic success for many migrants (see Picot and Sweetman 2005; Reitz 2007b; Galarneau and Morissette 2008).

With a long history of immigration and the value that Canadians place on multiculturalism, it is not surprising that the notions of equality and fair opportunity are often associated. This reputation, like in many other countries with high levels of immigration, is not often mirrored by reality. Increasingly, newcomers to Canada have experienced poor economic returns to their education, both in the short- and long-term stages of settlement. Recent immigrants fare much worse in the Canadian labour market than those migrating in earlier decades (Frenette and Morissette 2003; Aydemir and Skuterud 2005). Many studies using a variety of approaches have revealed that the immigrant population generally has lower economic outcomes on education than their

Canadian-born counterparts. These lesser returns, in the form of lower employment rates and weaker monetary returns, lead to mismatched employment and underutilization of the labour skills previously sought after. Additionally, new migrants are increasingly facing the so-called 'entry effect' which translates to weaker returns than both their predecessors and Canadian-born population (Frenette and Morissette 2003; Galarneau and Morissette 2004; Hum and Simpson 2004; Picot and Sweetman 2005). This has created debate not only on the value of immigrant education, but on the purpose of migration to the Canadian economy.

Several explanations compete to explain the lower economic performance of recently arrived immigrants. Explanations include: 1) devaluation of foreign-acquired credentials, such as education and prior work experience; 2) discriminatory attitudes and practices at both the hiring and promotion stages in the labour-force; and 3) the overall declining quality of immigrants accepted under the Economic class. More tellingly, the shift from traditional source countries such as the United States and United Kingdom, to more non-traditional places, mainly in Asia and Africa, has been cited on numerous occasions as a possible underlying source for the lower reported economic outcomes. It is these explanations that imply that racism covertly explains the weaker labour market performances of immigrants in Canada, an issue I further explore in this thesis.

Another contribution of this thesis considers place of settlement. The subject of weaker economic returns among immigrants has not included a sustained examination of the geographical context of labour market integration. A significant proportion of studies on immigrants in Canada focus on the nation as a whole (Picot and Hou 2003; Aydemir and Skuterud 2005) or solely look at those in Montreal, Toronto, and Vancouver (Grant

and Sweetman 2004; Picot and Sweetman 2005). While these cities serve as the primary destination for nearly three quarters of all newcomers, a notable sub-population is commonly overlooked; those working outside of these cities. As explained by Akbari and Harrington (2007:2), "in many public debates concerns have been raised that the economic benefits of immigration are unequally distributed because of the high concentration of immigrants only in large provinces, i.e., Ontario, Quebec and British Columbia." If geography is a central component of the study, the results tend not to distinguish between the smaller Census Metropolitan Areas (CMAs). This thesis attempts to address this gap by exploring the outcome of immigrants in locations other than Montreal, Toronto, and Vancouver.

A further dimension of interest is the role of social networks for immigrants when trying to locate employment or generate earnings. Termed *social capital*, this area has gained increased notoriety (see Putnam 2000) in the past few decades as it provides a compelling explanation for how migrants, especially those new to Canada, overcome potential barriers such as discrimination and devaluation of credentials in trying to achieve economic success. Are immigrants relying on social connections in the form of family, friends, or ethnic relations to secure employment and/or higher wages? Alternatively, due to the higher educational levels, especially among newer migrant cohorts, is social capital a largely irrelevant component when it comes to economic outcome? Because of the complex nature of the concept, the lack of universal consensus regarding its measurement, and the questionable impact of social networking on directly influencing financial returns in general, the results in this area have been limited and somewhat contradictory. That is both positive (Nakhaie 2007) and negative (Reitz and

Sklar 1997) outcomes of social networking have been reported. Nevertheless, it does appear to play a role in economic well-being, though like geographic settlement little research has focused upon immigrants outside of the three major immigrant-receiving cities.

The current study has two main objectives. The first objective is an analysis of the economic returns of education for migrants living in smaller centres. This is done by examining the variables personal income and employment status in the top twenty-four immigrant-receiving centres in Canada.[1] The secondary objective is to determine whether the presence of social capital leads to improved economic results by city of residence. In the process, this project will also evaluate the influence of perceived discrimination and place where highest education was attained in each of the tiers. All of these objectives are explored using the social capital framework and human capital theory. The presence of social capital serves as a means to account for the impact of social connections and networks in relation to finding employment and generating earnings. Human capital theory, which takes into consideration elements such as education and experience, is included because it can and does explain some differences (but not all) in labour market outcomes among the Canadian- and immigrant-born.

To address these research objectives, this thesis utilizes data from the Ethnic Diversity Survey (EDS). Unlike other Canadian datasets, the EDS allows for comparison between foreign- and native-born Canadians based upon ethno-cultural characteristics. The EDS was a joint initiative conducted in 2002 by Statistics Canada and the

[1] For the sake of clarity, the twenty-four centres are subdivided into three tiers, which are distinguished in the Methodology section. An additional tier is included representing the remainder of the country (i.e. both urban and rural locations).

Department of Canadian Heritage. The survey has two main purposes; 1) to help better understand how people's backgrounds affect their participation in the social, economic and cultural life of Canada; and 2) to provide a better understanding of how Canadians of different ethnic backgrounds interpret and report their ethnicity (Statistics Canada 2003).

The results of the analyses may potentially hold sociological and policy implications. Because of the substantial gap in immigration research and the limited knowledge of the economic outcomes of immigrants living in CMAs outside of the 1st-tier, the influence of social networks and social capital in relation to employment and earnings is largely unknown. In terms of social capital, the role of social networks may serve as a means to understand how immigrants adjust to the Canadian labour market. Are immigrants relying solely on family, friends, or ethnic-based community connections to find work? Can economic returns be the product of other factors, such as human capital? These questions also relate to the motivations behind immigrant settlement choices. If the selected predictors turn out to be significant, this would support the proposition that social connections are in fact an important component for foreign-born peoples seeking monetary gain. Alternatively, weak or insignificant results would imply that social networks exert minimal influence.

Regarding the contribution of the human capital variables in this analysis, it is important to identify the occupations that net the highest educational returns for immigrants. If economic outcomes are higher outside gateway CMAs, this would pose an opportunity to draw national attention away from 1st-tier cities to other places across the country. It may be a good 'selling point' for these centres desperate for migrant labour. From the migrants' perspective, it may cause them to consider moving to places

they otherwise may not have considered. Moreover, in relation to their Canadian-born counterparts, it is relevant to know whether the reported trend of lower returns to education for immigrants is consistent throughout the country. As a secondary goal, origin of education, knowledge of English and French, and prior work experience are all taken into consideration as they are also important components of human capital and have each been reported to exert an influence in the labour market.

This thesis is organized into five chapters. The second chapter of this thesis provides a comprehensive literature review relevant to this study, while discussing the theoretical implications of human capital theory, social capital framework and cultural capital as it relates to the project. The third chapter outlines specific details of the dataset, as well as the methodological guideline employed. The fourth chapter presents the results of the study and discusses its main findings. The fifth and final chapter reviews the main outcomes, limitations, and policy implications of the study, and includes recommendations for future research in the area.

Chapter Two: Literature Review and Theoretical Implications

This chapter presents demographic information of the immigrant population in Canada, as well as background data on the declining labour market outcomes and the economic returns for education among immigrants in the country. The information is then followed by a review of the main theoretical frameworks employed in this thesis: social capital framework, human capital theory, and cultural capital.

2.1 Immigrants in Canadian cities

Over the past century, the landscape of immigration has changed considerably in Canada. Today's immigrants are primarily settling in urban centres, rather than populating rural locales. According to Statistics Canada (2009a), in 2006, only 5.1% of the resident populations residing in "predominantly rural regions" are born outside of Canada. Of those living in rural settlements, a majority arrived into the country prior to 1981 (Bollman et al. 2007). For many immigrants, and especially newcomers, urban centres represent the primary choice for settlement. In 2006, 94.9% of Canada's immigrant population and 97.2% of recent arrivals (i.e. within the preceding five years) live in either a city or some form of urban community (Statistics Canada 2009a).

During the 1990s, roughly 2.2 million immigrants came to Canada, of which 94% chose to settle in one of Canada's major 1st- and 2nd-tier cities (Grant and Sweetman 2004). Frideres (2006) has developed a useful framework for understanding the geographic settlement patterns of immigrants to Canada. According to his framework, 1st-tier cities are those that receive more than 250,000 immigrants in a five year period while 2nd- and 3rd-tier cities receive between 40,000 to 100,000 and 5,000 to 15,000

immigrants respectively.[2] Nearly three quarters of recent migrants (approximately 74%) settled in one of the 1st-tier cities of Montreal, Toronto, or Vancouver (collectively termed "MTV") between 1996 and 2001 (Statistics Canada 2003). According to the 2006 Census, 62.9% of Canada's foreign-born population currently resides in one of these three gateway centres (Statistics Canada 2009a). Though it is clear that the MTV trio possesses the most drawing power of all major Canadian cities, 2nd- and 3rd-tier CMAs represent key destinations for many other newcomers (see Table 1). It is estimated that 15.2% of the entire immigrant population in Canada settle in the five 2nd-tier cities while 10.9% of migrants reside in the sixteen 3rd-tier centres (Statistics Canada 2009a). Additionally, as of 2006, 11% of the immigrant population is distributed in locales outside of the top twenty-four immigrant-receiving cities. Data from the 2006 Census shows that between the years 1991 to 2006, the number of immigrants living in 2nd-tier centres range from 45,000 in Winnipeg to 125,000 for Calgary compared to the more than 350,000 immigrants in each of the MTV trio.

Immigrants account for 12% of the total population of Calgary and between 6% and 8.5% of the populations of Edmonton, Hamilton, Winnipeg, and Ottawa-Gatineau respectively. In terms of overall immigrant composition, of tier two and three cities, six of 21 (Calgary, Hamilton, Kitchener, Windsor, Abbotsford, and Guelph) have over 20% of the population born outside of Canada while another seven have proportionally at least 15% of immigrants (see Table 2). As a result, immigrants constitute a sizable portion of the residents in many 2nd- and 3rd-tier centres. Thus, the smaller cities that comprise the 2nd- and 3rd-tier remain as important alternatives for immigrant settlement.

[2] Please note that this framework is a guideline and slight modifications are made which is discussed in the Methodology section.

The choice of where to settle in Canada appears to depend upon a variety of factors. These factors include, but are not limited to, employment opportunities, availability of affordable quality housing, knowledge of the city, and the presence of some form of social network, either community of family and friends, or others from the same country or ethnic background (Schellenberg 2004; Derwing et al. 2005). One of the primary reasons for success in attracting immigrants to 1st-tier cities is the presence of sizable social support networks. A possible explanation for this draw is the "group affinity hypothesis", which reasons that the presence of pre-existing ethnic communities has a strong, innate ability to simultaneously attract and retain new immigrants (Lieberson and Waters 1987; Bartel 1989; Kritz and Nogel 1994; Newbold 1999; Gurak and Kritz 2000; Chiswick et al. 2002; McDonald 2003; Hou 2007; Haan 2008) though this effect may differ by ethnic group (Newbold 1996). As Hou (2007:682) explains, migration/immigration to these areas likely has much to do with the fact that "social and economic amenities provided by these [pre-existing] ethnic communities not only ease the adjustment of new arrivals, but attract more established immigrants as well." Evidence from the Longitudinal Survey of Immigrants (LSIC), however, points to the presence of family and friends as the primary motivation for settling in Montreal, Toronto, or Vancouver (Halliday 2006). This suggests that area of settlement among immigrants is not necessarily due to the presence of pre-existing ethnic communities (Statistics Canada 2003; Haan 2008) though there is nothing to indicate that it serves as a hindrance. While ethnic networks may provide a measure of help post-arrival, they do not appear to be the most important reason for settlement in 1st-tier cities.

Table 1. Immigrants by period of immigration and by place of residence, Canada, 2006

Location	**Total population**	**Immigrant population**	**Immigrated before 1991**	**Immigrated between 1991 and 1995**	**Immigrated between 1996 and 2000**	**Immigrated between 2001 and 2006**
Canada	31,241,030	6,186,950	3,408,420	823,925	844,625	1,109,980
Tier One cities (over 250,000 semi-recent immigrants*)						
Toronto	5,072,075	2,320,160	1,152,045	357,865	362,320	447,930
Montreal	3,588,520	740,355	384,440	97,515	93,055	165,345
Vancouver	2,097,965	831,265	388,740	142,130	148,700	151,690
Tier Two cities (between 45,000 to 150,000 semi-recent immigrants*)						
Calgary	1,070,295	252,770	127,455	30,915	36,450	57,940
Ottawa - Gatineau	1,117,120	202,735	107,645	29,535	30,470	35,085
Edmonton	1,024,820	189,775	113,825	23,870	20,165	31,910
Winnipeg	686,040	121,250	75,200	11,120	10,820	24,120
Hamilton	683,450	166,630	111,635	16,420	17,785	20,785
Tier Three cities (between 5,000 to 40,000 semi-recent immigrants*)						
Kitchener	446,495	103,060	61,590	11,410	13,185	16,870
Windsor	320,730	74,770	40,435	9,085	11,425	13,830
London	452,580	87,420	56,735	9,235	8,425	13,025
Québec	704,180	26,205	10,120	3,255	4,390	8,445
St. Catharines - Niagara	385,035	70,320	52,610	4,825	5,265	7,615
Victoria	325,060	61,980	45,940	5,410	4,660	5,975
Abbotsford	156,640	37,070	20,760	5,430	4,930	5,950
Halifax	369,455	27,410	16,590	2,460	3,295	5,055
Oshawa	328,070	53,920	40,945	5,055	3,770	4,150
Guelph	126,085	25,765	15,890	3,090	2,875	3,910
Sherbrooke	183,635	10,360	3,765	1,185	1,590	3,820
Saskatoon	230,850	17,795	10,450	1,715	2,280	3,345
Regina	192,435	14,725	8,930	1,550	1,630	2,615
Kelowna	160,565	23,720	18,040	1,635	1,760	2,280
Kingston	148,475	18,505	13,640	1,285	1,415	2,165
Barrie	175,335	22,515	16,770	1,825	1,800	2,115

*Please note that in this case, semi-recent immigrants are those who immigrated to Canada between 1991 and 2006
**According to 2006 Census

At present, Montreal, Toronto, and Vancouver have little difficulty in attracting considerable numbers of newcomers. Conversely, tier two and three CMAs do not have nearly this type of success for a number of reasons. First, the absence of family and friends serves as a deterrent for some newcomers. Second, many new migrants simply are not aware of the existence of these smaller Canadian cities and the accompanying

opportunities that are available. As Haan (2008:754) describes this phenomenon: "immigrants choose gateway cities because they are simply the most established and well-known. Media reports and various internet sites advertise the strengths of Canada's global cities, but often say much less about its other offerings, which undoubtedly sways the decisions of many." Finally, there is also the likely perception that smaller cities have lower community support or ethno-cultural diversity, which may affect the decision on where to settle. Though evidence does not necessarily support the group affinity hypothesis, the absence of ethnic community may have some immeasurable effect on migration decisions. Of new migrants who do choose smaller CMAs, the most oft-cited reason according to the LSIC is the presence of employment opportunities (Halliday 2006; Derwing 2008; Ma 2010). Immigration to smaller centres appears geared to those with current job offers, specialized training, or insider access to local job opportunities not in direct relation to the presence of family or community support (Haan 2008). Hence in order to compete with larger 1st-tier cities, smaller cities such as Winnipeg must rely on legislation like the Provincial Nomination Program to attract skilled labourers.

Despite lacking the drawing power of the three 1st-tier cities, reports suggest that life is satisfactory for those who choose smaller urban centres. Data from Citizenship and Immigration Canada (2005) reveals that immigrants who live in any of the MTV triad tend to have much higher unemployment rates than those in the smaller CMAs as well as greater rates of poverty. Moreover, incomes of immigrants were higher in 2nd- and 3rd-tier cities (median $19,500) than in 1st-tier cities (median $16,800) resulting in a 16% difference in income levels (Bernard 2008). This income disparity may be in part due to less competition in the smaller urban locations in combination with a lower cost of

living. Nevertheless, while the large urban centres continue to attract more newcomers based upon social connections, smaller cities draw newcomers on the basis of economic opportunities.

Table 2. Percentage of immigrants in top 24 immigrant-receiving Canadian cities according to the 2006 Census.

Location	Immigrant (%)
Canada	19.8
Toronto	45.7
Montreal	20.6
Vancouver	39.6
Calgary	23.6
Ottawa - Gatineau	18.1
Edmonton	18.5
Winnipeg	17.7
Hamilton	24.4
Kitchener	23.1
Windsor	23.3
London	19.3
Québec	3.7
St. Catharines - Niagara	18.3
Victoria	19.1
Abbotsford	23.7
Halifax	7.4
Oshawa	16.4
Guelph	20.4
Sherbrooke	5.6
Saskatoon	7.7
Regina	7.7
Kelowna	14.8
Kingston	12.5
Barrie	12.8

2.2 Entrance into Canada and the Entry Effect

Income and employment parity in the labour market are reasonable expectations for migrants in any equitable society. Unfortunately, this has not been the case for the majority of Canadian newcomers. Prior to the mid-1960s, those born outside the country generally earned more than their Canadian-born peers. After this point, a decline in earnings is present for both male and female immigrants (see Abbott and Beach 1993; Li 2003a). An analysis by Beaujot and Rappak (1990) reveals that foreign-born men arriving after 1975 and immigrant women arriving after 1970 had lower earnings than

their Canadian-born counterparts. Several additional studies echo this trend of declining entry earnings which continued into the early 1980s (Bloom and Gunderson 1991; Abbott and Beach 1993), through the early 1990s (Reitz 2001a), and into the late 1990s (Green and Worswick 2002; Frenette and Morissette 2003).

Looking at the earnings for recently arriving newcomers, full-time immigrant workers arriving in the five-year period preceding each census from 1981 to 2001, Frenette and Morissette (2003) conclude that male immigrant workers who arrived in the late 1970s have mean earnings about 13% below the Canadian-born, whereas those arriving in the early 1990s had mean earnings about 45% lower. In the late 1990s, this gap reduced to 28% below the 1980 level. For women, the mean earnings dropped roughly 20% with a slight increase in the late 1990s pushing the mean to 11% below the 1980 level. This trend is also noted by Aydemir and Skuterud (2005) in their examination of immigrant arrivals between 1966 and 2000. Other researchers (Li 2003; Hyndman et al. 2006) provide further evidence through examination of the earnings gap between immigrants and Canadian-born in 1995. The difference in income for immigrant males was $16,260 and $10,569 for immigrant women as compared with $6,368 and $5,342 respectively in 1981. To summarize current research, multiple studies reveal a substantial decrease in earnings for immigrant males and females, a noted trend of the 1980s which has continued into the present.

While the earnings gap remains a focal point of immigration literature, employment rate also provides invaluable information concerning the current economic situation. Examination of recent employment trends confirms that newcomers face the same challenge for economic equality today as in the past. Using census data, Reitz

(2001b, 2007b) shows a declining rate of employment for foreign-born Canadians. As Reitz (2007b:6) states "the [employment] rate [for men] was 5% lower for immigrants arriving in the five-year period before 1980, down to 10% lower in 1990, and over 15% lower in 1996. For women, the [employment] rate was about 4% lower for immigrants arriving in the five-year period before 1980, 10% lower in 1990, and over 20% lower in 1996." This negative trend is later confirmed by Citizenship and Immigration Canada's (1998) analysis of the Immigration Data Base (IMDB). Therefore, employment rates have also played a considerable role in the economic struggles of new migrant labourers.

Clearly, the period following entry can be quite trying. Newcomers without prearranged employment or unique skill-sets likely face difficulties upon entrance into a new labour market. With a decreasing rate of employment for newcomers and high rates of job turnover compounded by the devaluation of previous credentials, immigrants must deal with significant barriers to economic success and well-being. It is not uncommon for initial immigrant earnings to lag behind those of native-born Canadians. Generally, this entry effect does subside over time (Carliner 1981; Chiswick 1978; Borjas 1985; Meng 1987; Picot and Sweetman 2005), though it typically differs by country of origin. With specific regards to time in the host country labour market, immigrants could expect equitable returns until the late 1970s, the last immigrant cohort to achieve parity with their Canadian-born counterparts (Picot and Sweetman 2005). Income levels for immigrants were 97% of the earnings of non-immigrant peers within 20 years. For the cohorts during the 1980s, immigrant earnings were approximately 85% of what their Canadian counterparts earned (Picot and Sweetman 2005) even after 16 to 20 years in the country. For the 1990s cohort, after 6 to 10 years in Canada, the early 1990s cohort was

earning roughly 70% of Canadians (Picot and Sweetman 2005). This pattern was similar for both males and females.

A closer examination of country of origin reveals that migrants from the USA or with European backgrounds having 10 to 15 years of work experience in the host society (i.e. Canada) tend to achieve parity with Canadian-born workers in eleven years (Bloom and Gunderson 1991; Bloom et al. 1994). Reitz (2007b) suggests this is due to the fact that immigrants from European countries have been effectively "assimilated" into the labour market because they likely face less discrimination and devaluation of credentials. European migrants entering Canadian job markets transition quicker because they come from similar economies and therefore tend to possess the labour skills necessary to succeed (Satzewich and Liodakis 2007). For those from non-European countries, the climb to equality is not as quick. Bloom et al. (1994) notes that for those immigrants from Asia, Africa, and Latin America, the "catch-up" could take as long as 43 years. Li (2000, 2003a) argues that this parity will not only take significantly longer to achieve, but the goal of equality with Canadian-born workers is likely out of reach for many from non-traditional source countries (where economies differ greatly from Canada's).

While Canada offers opportunities and experiences previously unavailable for newly-arrived immigrants, equality of employment and economic return may present a more difficult challenge. The current situation in Canada's labour market is becoming increasingly worrisome due to the disparity in economic outcome between foreign- and native-born Canadians over the past three decades. Various theories have been offered in an attempt to explain this current state of affairs. One of the most prevalent explanations is that the shift away from the United States and European countries as the main

contributors of immigrants to Canada has contributed to the changing labour market fortunes of more recent immigrants (Li 2008). Baker and Benjamin (1994), Frenette and Morissette (2003), and Aydemir and Skuterud (2004, 2005) all suggest that perhaps one-third of the decline in entry level earnings is associated with a countries of origin shift and the accompanying changes in the characteristics of entering immigrants. These characteristics include racialized minority status, home language, and mother tongue as well as devaluation of both prior work experience, and foreign-acquired education. Li (2008) contends, however, that this devaluation of credentials occurs prior to the compositional shift and thus serves as a contributing and compounding factor rather than as a cause. Regardless of the reasons for the economic inequality, a substantial number of newcomers, through no fault of their own, begin their new lives in the Canadian labour market at a considerable disadvantage.

2.3 Education and Economic Returns

At present, newly-arriving immigrants possess higher levels of education than both immigrants of earlier decades as well as Canadian-born. For example, in 1981, only 19% of very recent immigrants (those within the preceding five years) had university level degrees (Picot and Sweetman 2005). According to the 2001 Census, of these recent immigrants, 43.9% of men and 37.5% of women had a bachelor's degree or higher as compared to 16.6% and 21.7% for men and women respectively among the Canadian-born (Frenette and Morissette 2003). As of 2006, 58% of recent male immigrants and 49% of recent female immigrants had at least a bachelor's degree (Galarneau and Morisette 2008). The overall result is that 28% of newcomers possess university degrees compared to 23% of Canadian-born (Galarneau and Morisette 2008). Research by Reitz

(2007b), Galarneau and Morrisette (2008), argues that immigrants in Canada average roughly 0.4 more years of education than their Canadian-born cohort, while the most recent immigrants have nearly 0.6 more years of education. However, despite the increase in education of foreign-born applicants, research indicates that the value of educational credentials for the immigrant population are often minimized or devalued. As Reitz (2007b:14) puts it, "all groups with rising education make gains, but because of differences in returns to education, those gains will be greater for the native-born than for immigrants."

Foreign-born applicants, especially those who have recently arrived, suffer from lower returns on their education in relation to their native-born counterparts. Returns in this case refer to their increases in earnings associated with increased education. This is further complicated by the increases in post-secondary education among native-born Canadians, particularly among new labour market entrants in the major urban centres (Reitz 2003; Banerjee and Verma 2008). As a result, most newcomers who do find work enter the labour-force in jobs below their educational or skill level, unrelated to prior education or work experience. Galarneau and Morissette (2004:13) explain that "among recent immigrants with a university degree and employed between 1991 and 2001, at least one in four had a job requiring no more than a high school education." This trend continues into 2006 as the proportion of recent immigrants with a university degree in jobs with low educational requirements varies between 22% and 28% for men and between 36% and 44% for women (Galarneau and Morisette 2008). In comparison, only 10% of both male and female native-born Canadians worked in jobs beneath their educational attainment. Evidently, to be on a level playing field, or at the very least

competitive in the labour market, the foreign-born population needs to be more educated though this by no means guarantees future success.

The literature suggests that devaluation of credentials among immigrants occurs most often for those whose education is obtained outside of Canada. Both Schaafsma and Sweetman (2001) and Ferrer et al. (2006) find that the economic returns to foreign-obtained schooling for immigrants are lower than the returns for immigrants and non-immigrants schooling acquired in Canada. This supports Li's (2001) study which shows that immigrants with foreign-acquired degrees had lower earnings than Canadian-born degree holders and immigrant degree holders with mixed education. Reitz (2007b) estimates that the value of immigrants' foreign-acquired education is about two-thirds of the value of a similar amount of education for the native-born. Furthermore, location of this foreign education appears to be just as significant. Multiple studies (see Ferrer and Riddell 2003; Aydemir and Skuterud 2004, 2005; Halli and Buzdugan 2009) discovered that individuals from non-traditional source countries do receive a lower return to their years of schooling than those from traditional source countries.

Since it is clear that foreign-acquired education is valued less than education attained in Canada, the question must be asked as to why this is the case. Two schools of thought have emerged in an attempt to explain devaluation of immigrant education credentials, though neither has been conclusively proven. The first school argues that foreign education is of lower quality than a Canadian education or if it is equal, it is not completely transferable to the Canadian labour market. This may be due to language barrier issues, cultural differences, and/or education quality. The overall argument is symptomatic of the larger belief that the quality of immigrant has decreased over time.

Three studies (Green and Worswick 2004; Ferrer and Riddell 2004; and Galarneau and Morisette 2008) point to the increasing numbers of immigrants from Asian countries, for which little information is available about education quality, potentially leading to some mistrust among employers and preventing utilization of prior foreign-obtained credentials. Sweetman's (2004) analysis of the 1986, 1991, and 1996 censuses shows that measures of the average quality of education in immigrant source countries are associated with lower returns to their education in Canada. This work is challenged by Reitz (2007a) who suggests that the immigrants, who in fact achieve higher levels of education in "poor" countries, may indeed possess higher levels of academic aptitude. This would negatively influence the relationship between lower earnings for immigrants from particular countries as it does not indicate the quality of immigrant education.

The second camp suggests that discrimination is a likely a cause of devaluation of educational credentials. Research on discrimination of immigrant qualifications has gained interest in recent years. Pendakur's (2000) study shows that foreign-acquired education poses a problem for racialized minorities, especially women. Esses et al. (2003) also notes that the evaluation of foreign qualifications tends to be lower among persons who show other evidence of racial bias or prejudice. Reitz (2007b) proposes that this potential discrimination varies among minority groups and by gender as evident by his and Breton's (1994) analysis of the 1986 Census. What can be conclusively stated is that while education and prior work experience are strong indicators of future success for both males and females in the Canadian labour market, origin of credentials is equally as important. The significance of possessing an education from Canada is that Canadian acquired credentials are more advantageous than foreign-acquired credentials.

Schaafsma and Sweetman (2001) note the importance of age of immigration on economic returns for education (Sweetman and Warman 2009). As Sweetman and Warman (2009:10) summarize, "immigrants who come to Canada at a young age, and therefore obtain Canadian education, do well in the Canadian labour market while immigrants who come at an older age and obtain their education from abroad have poorer outcomes." The effect of being foreign-born appears to be negated if immigrants arrive before the age of ten (Sweetman 2004). Nevertheless, it becomes evident from the data that the varying disadvantages of racial minorities exist, suggesting some sort of racial pecking order that may or may not be real.

Of final note is the absence of literature regarding education and economic return among immigrants examining differences in city and province of residence. Currently, a number of studies focus either on Canada as a whole, (see Picot and Hou 2003; Aydemir and Skuterud 2005) or specifically 1st-tier centres (see Grant and Sweetman 2004; Picot and Sweetman 2005). Of the studies that examine Canada as a whole, geography is usually measured by province rather than city. This leaves a significant gap in the literature regarding 2nd-, 3rd-, and 4th-tier Canadian cities, as data on issues such as education and economic return among newcomers is sporadic at best. A study by Laryea (2002) finds that immigrant earnings converge much faster with Canadian-born in smaller-sized cities than in 1st-tier centres. Another study by Haan (2008), which compares the economic well-being of immigrants in gateway cities (i.e. the 1st-tier) versus 24 non-gateway centres, explains that while there is virtually no difference between immigrants living in gateway and non-gateway cities in terms of employment mismatch, unemployment rates and income at the time of arrival, newcomers in non-

gateways cities are much more likely to be appropriately employed, resulting in better economic well-being over time. Though this study does not individually compare smaller Canadian CMAs, it does suggest that there are differences by tier and by the length of time immigrants are present in the country.

It is understandable that significant attention is paid to the 1st-tier CMAs. The number of immigrants arriving to these centres each year is considerable. However, this presents a very real problem for immigration research, as smaller cities are either being ignored entirely or lumped together in a fashion that does not provide clear or comprehensive results. It is difficult to know if any of the smaller centres, individually or in groups, experience any difference in the trend of lower economic returns for foreign-born education or if the observations of tier one CMAs are representative of the status quo. Literature has shown that foreign-acquired education is devalued in the Canadian labour market. Consequently, newcomers who are accepted into Canada on the basis of prior education (among other factors) experience a letdown in terms of employment and economic remuneration due to the aforementioned credential diminishment. This seems to run opposite to the longstanding theory of human capital. Despite possession of higher levels of human capital, immigrants do not seem to see the same benefits as those born in Canada.

2.4 Theoretical Frameworks

In an effort to explain the disparity between native-born and immigrant Canadians in Canada's major immigrant-receiving centres, this thesis employs two theoretical frameworks to explore the various dimensions of this phenomenon: the frameworks of human capital, and social capital. A third theoretical framework, cultural capital, is also

briefly discussed in this thesis, though not expressly studied given the poor quality of data in the selected dataset.

2.5 Human Capital Theory

With a continued focus on the economic outcomes of foreign-born Canadians, human capital theory represents the most frequently cited postulate in current economic literature. According to Osberg (1981:98), the theory of human capital is considered to be ‘‘the largest and most influential economic approach to the differences of individual earnings.’’ Though officially articulated as an economic theory in 1960 by Theodore Schultz (Blaug 1976) and elaborated upon soon afterwards by the works of Gary Becker (1964) in his book, *Human Capital*, the theory's existence predates this by several centuries. Among the first to outline the core concepts of the human capital framework was prominent economist Adam Smith, whose contributions, as Sweetland (1996:343) describes, established "the foundation of all productive human capital frameworks." This foundation is based on principal components focusing on investment in skills and useful abilities acquired through labour, work experience, and education (Kiker 1966; Sweetland 1996). Smith was followed by John Stuart Mill and Alfred Marshall. Mill viewed human capital as a means to obtain wealth through market exchange as this was the only way to determine value. Marshall agreed with Smith, believing that human abilities aid in the production of wealth.

Within the discipline of Sociology, human capital theory appears frequently in the functionalist perspective exemplified by Blau and Duncan's Status Attainment model. The model of Status Attainment focuses upon an individual's position in class and society by taking into account both achieved factors, such as educational attainment, and

ascribed characteristics such as family wealth (i.e. income). Contrary to the framework of human capital, Status Attainment is not just concerned with singular achievements (i.e. experience and education) but rather all of the elements that have shaped an individual. However, evidence suggests that achieved factors and ascribed characteristics are by no means equal. According to Lin (1999:468), the major conclusion from Blau and Duncan's (1967) study, "was that, even accounting for both the direct and indirect effects of ascribed status (parental status), achieved status (education and prior occupational status) remained the most important factor accounting for the ultimate attained status." Hence, while ascribed characteristics play a role, they appear to be secondary to individual accomplishment.

According to Reitz (2005:5), human capital theory "suggests that workers' earnings reflect the productive value of their skills — particularly skills based on formal education and work experience". Thus, any investment in education and work experience should be recouped through the labour market via economic returns (Becker 1964; Yan et al. 2009). Buzdugan and Halli (2009:368) suggest human capital's contribution "due to the theory's focus on education, training, and work experience, inequality is justified by individual achievements alone, and the society is believed to operate as a meritocracy." Accordingly, human capital theory would hold that income disparity between immigrant and non-immigrant Canadians over the past few decades is a result of the individual themselves and not social barriers. Whether this is the result of lack of motivation, language barrier issues, or just reflective of differences in quality remains debatable (Buzdugan and Halli 2009). The debate over the root causes of income inequality among immigrants is one of the major drawbacks of the theory of human capital, as its

applicability remains questionable with regards to actual immigrant experiences, nor can it take into account external elements such as gender and racial discrimination in the labour market (Marginson 1997; McBride 2000; Krahn and Lowe 2002; Buzdugan and Halli 2009). Regardless, human capital represents one way to view the relationship between education and economic productivity despite its inability to provide a holistic view of income and occupational attainment.

At present, human capital is a popular economic theory among immigration researchers despite its notable limitations. In terms of the Canadian context, the human capital of immigrants is generally valued less than Canadian-born. Li (2008) notes that the magnitude of devaluation of foreign-acquired human capital (i.e. education and work experience) in the Canadian labour market is dependent upon on numerous factors including gender, race, country of origin, and age at immigration (deSilva 1997; Li 2001a; Reitz 2001a, 2001b; Schaafsma and Sweetman 2001) which are largely status based concepts, liable to face discrimination. This issue is further complicated by increased levels of educational attainment for native-born Canadians and from immigrants arriving in earlier decades (Reitz 1998, 2001b). Perhaps everyone is facing tougher economic integration regardless of whether or not they are immigrants as the idea of the meritocratic society would imply. Furthermore, a compositional shift in country of origin in recent decades has had a significant effect on the value of human capital. At present, a significant portion of newcomers originate outside of the "traditional" source countries. As a result, issues such as language, prior work experience, and foreign-obtained education have greater negative effects on human capital for newcomers from non-traditional source regions than from the US and Europe. For these reasons, it is

believed that newcomers either possess lesser skills or are of lower quality than their predecessors. This does not take into account that perhaps some measure of discrimination towards racialized minorities is present. For whatever reason(s), despite the increased levels of human capital among new incoming migrants (which ironically remains an important prerequisite for acceptance into Canada), the transferability of human capital into the Canadian labour market can be rather troublesome depending on a variety of factors, most notably country of origin, racialized status, and gender.

Like much of the existing literature, discussions of the quality of immigrants have revolved mainly around Canada rather than individual regions or cities (see Boothby and Drewes 2006; Coulombe and Tremblay 2007; Buzdugan and Halli 2009) or with an extended focus of 1st-tier CMAs (see Reitz 2001a; Picot and Sweetman 2005). Few have focused exclusively on either 2nd- and/or 3rd-tier cities resulting in a significant gap in the literature (see Hyndman et al. 2006). A quarter of newcomers initially reside in these 21 cities yet little information is readily available regarding the transferability of human capital within these smaller centres.

Since human capital remains an important theoretical tool in immigration research, its inclusion in this research is vital. Any research on economic outcomes for immigrants must take into account prior education and work experience. For the purpose of this thesis, human capital serves as a secondary theory through which to explore the economic outcome of both immigrants and native-born Canadians with similar levels of education among the four tiers.

2.6 Social Capital Framework

While human capital is a powerful explanatory tool of economic outcomes for foreign-born Canadians, it is not the only type of capital at work. As Li (2008:293) indicates, "the literature suggests another form of capital — social capital — (that) may explain how some immigrants mobilize social relations to overcome hardships and insufficiencies." According to Kazemipur (2004:7), social capital "is a product of social networks and the resources available through such networks, as well as the extent to which the people in such networks are willing to share their resources with one another." The richness of a social network is dependent upon its size as well as the resources of the individuals within the network. To achieve high levels of social capital, the presence of both components is necessary. The absence of either reduces social capital, while the lack of both results in either a poor, or nonexistent, social capital situation. Thus, a social network sufficient in both quality and quantity suggests a larger amount of social capital is available to group members. The potential explanatory power of social capital can be immense in the sense that "who you know" may be an integral indicator of future success. From a theoretical and practical standpoint, it is easy to see the usefulness of this framework. Social capital outlines the potential positive consequences of networking and socializing while minimizing its negative qualities (Portes 1998). Thus, it is not surprising that the social capital framework maintains a consistent presence in Canadian immigration literature (eg. Li 2004, 2008; Aizlewood and Pendakur 2005; Nakhaie 2007; Kazemipur 2006, 2008).

A growing body of research uses social capital as a framework for understanding various labour market outcomes of immigrants. As Li (2008:293-294) summarizes, "the renaissance of research on social capital has rekindled interest in how an individual's

connections to a social group can provide group-based resources to enable individual economic gains." With its origins stemming from Karl Marx's concept of "class for itself" and Emile Durkheim's theory of social solidarity, social capital has been used by a multitude of theorists since the 19th century (Kazemipur 2008). One of most well known social capital theorists is Pierre Bourdieu. According to Nakhaie (2007:309), Bourdieu views social capital as "a private resource that results from membership in neighbourhoods, workplaces, and kinship groups. These memberships transform into obligations based on feelings of gratitude, respect, and friendship, which are then convertible into economic or other valued resources." Coleman (1988a:S98, 1990:302) suggests that social capital functions as "a variety of entities with two elements in common: They all consist of some aspect of social structures, and they facilitate certain action of actors---whether persons or corporate actors---within the structure." Therefore, social capital is a multi-faceted dimension of the social structure that aids the actions of individuals' within this structure. Social capital is located within the group enforcement of norms, obligations, reciprocity of expectations, trust, and information channels that affect individual behaviours (Portes 1998; Nakhaie 2007).

More recently, Robert Putnam's (1993, 2000) work has focused on the importance of generalized reciprocity in the creation of social capital. Generalized reciprocity works in conjunction with both trust and honesty, grounded in dense networks of social exchange (Nakhaie 2007). Putnam also makes explicit mention of two forms of social capital: bonding and bridging. Bonding social capital refers to, as Wuthnow (2002:670) describes, "the interpersonal solidarity that is often present among people who associate in small groups, local communities, and other settings over extended

periods of time." This includes the emotional connections between individuals such as family and close friends of the same ethnic group (Ellison et al. 2007; Nakhaie 2008). Alternatively, bridging social capital consists of loose associations or "weak" ties (Granovetter 1973, 1982) across dissimilar and diverse heterogenous social groups. Ties and associations may or may not be useful but generally do not provide any emotional support. It is clear that while there is no definitive conceptualization of social capital, the general consensus is that it hinges upon social involvement and/or membership in order to establish trusting social networks, communications, and a flow of information that will consequently lead to an exchange of resources that have potential to be beneficial while taking place within the social structure. The benefits of social capital would provide an advantage in the competitive labour market when individuals vie for work with or without similar skills, education, and work experience. This could be helpful for those new to a country seeking economic opportunities. Consequently, the definition and operationalization of social capital used in this thesis follows the works of Putnam, Nakhaie, and Mata and Pendakur (2010) as well as elements of Coleman (1988), Granovetter (1973), and Portes and Sensenbrenner (1993), with an explicit focus on trust and reciprocity that are associated with bonding (i.e. interaction with family and friends) and bridging capital (i.e. membership in organizations).

Due to the elastic nature of the term and the variation in definition, measurement of social capital has diverged into three main approaches. The most common of the three found in the literature is that of the Associationist approach (Kazemipur 2004). Based upon Putnams' (1995, 2000) work and later summarized by Wuthnow (2002), this particular approach attempts to measure social capital through four main indicators.

These indicators are: 1) membership in associations (e.g., Parent-Teacher Associations, Trade Unions); 2) civic engagement or participation in civic activities (such as voting in elections, assisting in political campaigns, participation in public demonstrations, signing petitions, writing letters to MPs, etc.); 3) the level of trust in others; and 4) volunteering (e.g., working in community projects, participating in church-based activities, and making donations). Though multiple variations and sub-categories of indicators have arisen out of Putnams' work that may better capture the key concepts of the bonding and bridging forms of social capital more aptly, it this work that has provided the foundation for the Associationist approach.

Established on the foundations of trust, shared norms and values (Nakhaie 2007), which are deemed important for the formation of social capital, bonding and bridging social capital are viewed as viable avenues in the search for labour market positions. Several researchers (see Campbell, Marsden and Hurlbert 1986; Lin and Dumin 1986; Lin 2001; Ooka and Wellman 2006) have identified the importance of bonding social capital in finding employment opportunities suggesting that because of the scarce and valuable nature of this information, strong social ties are a prime source for acquisition of this knowledge. Alternatively, Granovetter (1973, 1974, 1982) has shown that weak ties, and by proxy bridging social capital, are central for obtaining professional-level labour positions. As outlined by Ooka and Wellman (2006), Granovetter's argument holds that weak associations are more beneficial than strong ties (i.e. bonding social capital) because they allow for connections in social circles outside of family, friends, and communal relations, which are more likely to provide information on employment opportunities and casts a wider 'net' from which to obtain useful labour market

information. Reitz and Sklar's (1997) research also supports this notion, finding that the maintenance of ethnic networks, which are representative of bonding social capital, results in penalties for both earnings and economic opportunities. Isajiw et al.'s (1993) work however suggests that the negative effects of strong ethnic ties do not apply to European groups. Ooka and Wellman (2006) also show that minorities utilizing contacts outside their own ethnic group have higher earnings than those relying upon ethnic connections from within while other studies, such as Kalbach and Kalbach (1995), Li (2001b), and Pendakur and Pendakur (2002), conclude that individuals that are more ethnically connected are generally the recipients of earnings penalties.

2.6.1 Social Capital in Canada

Following arrival and settlement, it is often difficult to find suitable employment. Devaluation of prior of work experience and education is not an uncommon experience for newcomers. Further compounded by discrimination within the job sector, be it overt or covert, devaluation contributes to a difficult climate for immigrants to succeed in. As a result, Portes (1995b:256) suggests that the only recourse for these newcomers is "to band together in search of moral support and economic survival." Thus family, friends, and/or the ethnic community not only serve as a source of stability, reassurance, and cultural comfort for those newly arrived but also as a potential network for future employment. It would seem then that immigrants, and more specifically those choosing 1st-tier cities, are almost always better off compared to those in 2nd- and 3rd-tier CMAs as well as non-immigrants because they would inherently possess greater levels of social capital due to existing networks. In reality, do these social networks provide any more aid in finding work than the social networks of 2nd- and/or 3rd-tier CMAs? How do they

fare in comparison to Canadian-born residents? While the Canadian literature is viewed as thin and mostly inconclusive (Kazemipur 2008), this aspect of social capital is increasing in popularity. Some studies (see Kay and Johnston 2007c) have found partial support for the relationship between social capital and rising number of immigrants and ethnic/racial minorities. Nakhaie (2007) specifically finds that social capital, though weak, does in fact help to improve the earnings of immigrants and racialized minorities. Moreover, the study reveals that social capital is a useful resource for accessing more resources, but its effect varies based upon factors such as gender (van Emmerik 2006) and ethnicity. A few Canadian studies have also reported negative correlations between social capital and racial/ethnic/cultural diversity (see Aizlewood and Pendakur 2005, 2007; Kay and Johnston 2007c; Kazemipur 2008). Others, such as Wilkinson et al. (2010), have shown mixed findings. Whether positive, negative, or a combination of both, social capital evidently has a role to play.

Though social capital may not focus specifically on economic returns, it provides a compelling theoretical tool for the exploration of social networks and ethnic ties of immigrants. According to LSIC data, the decision to settle in 1st-tier cities for immigrants is based upon the presence of familial and/or social relations while the choice for settlement in smaller centres is based upon economic reasons (Halladay 2004; Justus 2004). The presence of the social capital framework is intended to determine the potential role social support plays in finding employment and consequently, economic success. Nevertheless, there are drawbacks. Simply stated, the concept of social capital is not well defined or well operationalized. The vast majority of studies treat social capital as an individual indicator—not a community-level indicator (see Loury 1977;

Glaeser et al. 2002). Furthermore, although social capital serves to explain the potential benefits of social networks and ethnic ties, it cannot take into account the glass ceiling most immigrants experience because of a systemic rather than individual concern. What does become clear from the literature is the importance of region of origin and ethnicity in the future success, regardless of quantity or quality of the network.

Though human capital and social capital represent two of the better documented forms of capital, a third type, namely cultural capital must be recognized. It is with this framework that role of cultural adaptation can be understood.

2.7 Cultural Capital Framework

Developed in the context of educational research, cultural capital was established by Bourdieu and his colleagues in the 1960s and 70s (Lareau and Weininger 2003). Conceptually, cultural capital provides a way to view culture as a somewhat tangible resource that can be both accrued and expended. As Bourdieu (1977:488) explains, cultural capital refers to the ‘‘instruments for the appropriation of symbolic wealth socially designated as worthy of being sought and possessed.’’ Therefore, it is culturally-based assets, such as knowledge or skills that allow for class transition and cultural adaptation. This form of capital excludes financial resources or any other form of economic capital. Though Bourdieu outlines multiple forms in greater detail, for the purposes of this thesis, cultural capital simply serves as a representation of the values, tastes, preferences, language skills, experiences, education, and knowledge (among a variety of other characteristics) acquired throughout life. Ultimately, these personal and group characteristics culminate in an abstract form of currency that may aid in the process of cultural recognition and adaptation.

Whether we are or are not aware of it, everyone possesses a certain amount of cultural capital. With this type of capital, newcomers in particular seek to convert foreign-acquired conceptual resources into usable socially-based funds, and adapt to the dominant culture of the host society. Cultural adaptation must be seen as an important component for economic success in Canadian society. Reitz (2007a) believes that any economic success hinges upon the level of cultural assimilation, or "Anglo-conformity", of newcomers to the dominant culture of said society. Inability to adapt or assimilate to the dominant culture leaves newcomers on the outside looking in. As Walters et al. (2007:39) summarizes Djajic's (2003) work, "cultural disparities in customs, values and attitudes can impose limits on labour market opportunities for immigrants that prevent the realization of their full economic potential." Those that do not possess the right form of cultural capital (for example, lacking fluency in the primary host country languages) negate any advantages that previously aided in the entrance process. The major consequences of improper cultural capital are difficulty in finding relevant employment and lower labour market entrance earnings (Walters et al. 2007).

The effect of inadequate cultural adaptation would seem more likely to affect those born outside non-traditional source countries than the traditional locations, such as Western Europe and the USA, due to the diverse and different cultures from which they originate (see Satzewich and Liodakis 2007). While logical in theory, evidence from Reitz and Sklar (1997) suggests otherwise, as Anglo-conformity varies among origin groups, and seems less important in affecting the employment success of racial minorities than those of European descent. This result is interesting considering that a significant number of newcomers currently are members of racialized minorities with "foreign"

accents and some with a primary language other than English or French. This also underscores Walters et al. (2007) concerns as much of the literature has taken for granted the relationship between cultural and economic assimilation. As the authors (2007:40) summarize, "the links between these dimensions of assimilation remain empirically underexamined, particularly when applied to the issue of ethnic identity." Hence, the assumption of cultural adaptation is a theoretically viable explanation of economic success yet it remains empirically challenged for the moment, due to the lack of directed studies in combination with methodological issues.

Much like social capital, the cultural capital framework provides a valuable, if not unique, theoretical lens through which to explore the individual-level class transition and cultural adaptation. However, similar to social capital, cultural capital is empirically difficult to test. As Barone (2006:1043) states, "it is well recognized that there is no consensus about the proper way to operationalize the notion of cultural capital." Cultural capital constitutes a broad topic composed of a multitude of conceptual elements of which there are diverse indicators in the form of cultural competence of so-called "high" culture (i.e. art recognition, knowledge of famous composers, etc) (DiMaggio 1982; De Graaf 1988). Consequently, due to the nebulous nature of the concept, coupled with lack of recognized cultural capital indicators within the Ethnic Diversity Survey, the cultural capital framework will be excluded from this thesis, though its potential influence on labour market outcomes amongst immigrants is acknowledged.

This chapter has presented a review of the literature on economic outcomes of immigrants and the dominant theoretical frameworks. The next chapter reviews the

methodological processes used to identify, operationalize and analyze the various indicators of income and employment status among immigrants.

Chapter Three: Source of Data and Methodology

This chapter describes the data source and methodological analyses in this thesis. It includes a discussion on the sampling method, research objectives, description of the sample, the operationalization of the variables, and the data analysis technique.

3.1 Characteristics of the Dataset

The Ethnic Diversity Survey (EDS) master file[3], provided by Statistics Canada, is housed at the Manitoba Research Data Centre (RDC). While there is a Public Use Microdata File (PUMF) version of the dataset that is publicly available, it lacks detail on certain variables including city of residence, origin of education, and country of origin. Although a welcome source for more detailed data, the RDC access poses several challenges. For example, only weighted results are permitted to be released, tables must conform to strict standards to prevent identity disclosure[4]. Following the guidelines set by Statistics Canada, the tables in this thesis have been weighted, rounded and bootstrapped to ensure maximum representativeness as well as to protect the respondents' anonymity.

The decision to use the EDS over other datasets hinges upon several factors. First, this database presents the only large scale survey on ethno-cultural diversity in Canada with comprehensive measures of human capital, social networks, and perceptions of discrimination (Statistics Canada 2009b). Second, the two main competitors of the EDS have significant limitations if applied to this project. The Longitudinal Immigration Data Base (IMDB) lacks information on human capital following arrival to Canada and

[3] While the research and analysis are based on data from Statistics Canada, the opinions expressed by the author do not represent the views of Statistics Canada.

[4] Identity disclosure occurs when a specific individual or workplace can be identified from the released data. This type of disclosure is rare but can happen. It ranges from specifically stating whom the respondent is to providing enough information to reveal a respondent's identity (Statistics Canada 2010).

does not include any information regarding native-born Canadians. While valuable in its own right, the Longitudinal Survey of Immigrants to Canada (LSIC) is a unique sample consisting only of immigrants who have been in Canada for 4 years or less, making a comparison with either longer-term immigrants or those born in Canada impossible. Like IMDB, it also excludes native-born Canadians. The EDS master file allows for analysis at the city level, and more specifically, for an explicit focus on smaller immigrant-receiving centres, unlike in other data sets. Hence the limitations of both the IMDB and LSIC in conjunction with the availability of measures of both forms of capital make the EDS the most appropriate database for this thesis.

3.2 Sampling Method

The EDS is a post-2001 Census cross-sectional survey conducted jointly by Statistics Canada and the Department of Canadian Heritage. The target sample includes individuals aged 15 and over, living in private dwellings residing in one of Canada's ten provinces. The sample comprises of Canadian citizens, landed immigrants, and those with temporary permits.[5]

Selection of the target sample is achieved through a two-phase stratified design that utilizes probabilistic sampling to select respondents at random. Phase one involves the distribution of the long questionnaire to one in five households in Canada. The second phase consists of a selected sub-sample of phase one respondents judged through responses given in the long form to questions related to ethnic origin, place of birth, and birthplace of parents. To achieve an ethnically diverse sample, the target population is

[5] The following people were excluded: persons under 15 years of age; Aboriginal Peoples and those living on Indian reserves; and those living in collective dwellings (hotels, nursing homes, hospitals, military or work camps, prisons, residences for senior citizens, etc.), or in the three territories.

divided among a series of strata, based on responses of ethnicity and generational status. The survey over-sampled non-British/French minority groups since the primary goal of the study was to understand the unique discrimination experiences of racialized minorities of several major ethnic groups and thus obtained relatively large samples allowing for comparisons between these minority groups and more established, large ethnic communities in various characteristics.

The initial population frame of 57,242 is reduced to an unweighted sample of 42,476 but geographical representation is maintained[6]. This represents 23,092,643 person when the data are weighted (Statistics Canada 2002). The response rate is 75.6% (Statistics Canada 2002), well above the acceptable quality control range. The survey was conducted between April and August 2002 through use of computer-assisted telephone interviews (CATI). The average interview length was 35 to 45 minutes. In addition to the official languages of English and French, interviews were conducted in seven non-official languages (participant's choice): Mandarin, Cantonese, Italian, Punjabi, Portuguese, Vietnamese and Spanish to capture better information for non-French or English speaking participants.

The decision to employ telephone surveys in a number of languages offers several benefits and drawbacks. Among its strengths is the ability to conduct large surveys in a short length of time and the opportunity for closer supervision of interviewers to assure

[6] It should also be noted that in selecting the sample, a coding error slipped into the survey frame for some Census subdivisions. This problem mainly affects two Atlantic Provinces, Nova Scotia and New Brunswick. A detailed study of the characteristics of persons not covered, using census data, shows that the sample remained representative of the target population for the majority of the survey variables of interest. Adjustments similar to those used for correction of non-response were made to the weights to reduce potential bias due to this error in coverage. Although the bias created could not be completely eliminated, the quality of the data at the national level was not affected. However, all identification of provinces in the Atlantic Region was removed from the final database. The lowest geographical level for the Atlantic Region is the indicator of Census Metropolitan Area (CMA) and the non-CMAs (Statistics Canada 2003).

greater standardization of administration (Holbrook et al. 2002). Furthermore, interviewers can elicit more complete and substantive answers from respondents as well as ask for clarification and elaboration concerning responses. On the downside, telephone surveys exclude individuals who do not have telephones or publicly-listed numbers, which may be particularly problematic for some racialized populations as they are less likely to have telephones. This type of survey technique also tends to have a higher non-response rate than face-to-face interviews, as the time to completion is short, though the trade-off is that the survey must be short to accommodate CATI. There are also some problems with sensitive questions, such as discrimination experiences, which respondents may be less likely to divulge over a telephone (Fowler 2002). Similarly, the option of conducting the interview in one of nine different languages is necessary for a survey whose goal is to contact people of various ethnicities, making the issue of quality control a bit more challenging. The translation process might also increase the error associated with the construction of the questionnaire.

The strictest ethical guidelines were followed during the collection of data. All information obtained by Statistics Canada through the EDS is confidential and subject to the Agency's various policies and practices related to data collection, analysis and dissemination activities. The release of any private information is prohibited under both the *Statistics Act* and the *Privacy Act*. Furthermore, Statistics Canada only releases information that identifies an individual or group with prior consent. All individuals who participated in the EDS respondents did so voluntarily. Those who chose not to participate did so without fear of duress or repercussions.

3.3 Research Objectives

There are eight hypotheses in this research project; four for each dependent variable. The postulates are as follows:

A) That despite similar levels of education, immigrants have lower economic returns than their native-born counterparts in all four tiers;

B) That there is no difference in economic returns for education between immigrants in 1st-tier cities and those in the three smaller tiers;

C) That immigrants who choose to live in first-tier cities have a greater economic advantage than those living elsewhere in Canada; and

D) That that regardless of location in the country, being an immigrant and a member of a racialized minority group would result in negative outcomes for both income and employment.

Hypotheses A and B address the influence of human capital on economic outcome. There exists a healthy body of research to suggest that immigrants, regardless of educational qualifications, are at a disadvantage when in comparison to their Canadian-born counterparts (see Reitz 2007b). There is however some question as to its applicability in smaller Canadian CMAs (and by proxy, tiers). Thus it is presumed that regardless of location in the country, there exists a measure of disparity between immigrants and non-immigrants. Likewise with the first hypothesis, economic returns to education outside of the 1st-tier are not well established though it is expected that outcomes of immigrants in each of the four tiers should be relatively similar.

The third hypothesis evaluates the impact of social capital on earnings and employment. A strong proportion of new immigrants tend to choose one of Montreal, Toronto, or Vancouver as their primary destination for settlement in Canada due to the

presence of family, friends, or communal support (Schellenberg 2004; Derwing et al. 2005). Conversely, economic opportunities are reported to be the most likely reason for settlement outside of these gateway centres. Hence it is presumed that immigrants in 1st-tier CMAs have greater access to social networks or possess a greater opportunity in establishing beneficial social connections than that elsewhere in the country, which are reflected in the dependent variables.

The final hypothesis concerns itself with racialized status. Following the origin shift from traditional to non-traditional source countries, an increasing number of newcomers admitted entrance into the country are classified as members of a racialized minority group (Reitz 2007a). This has significantly contributed to the changing demographics of the immigrant population within Canada. However, this has not translated well economically as in comparison with their counterparts of European origins, both immigrants and non-immigrants alike, the results have been less than encouraging. For example, African- and Caribbean born migrants experience an earnings disadvantage in comparison to all other groups (see Li 2008). Consequently, it is believed that regardless of location in the country, immigrants that identify themselves as a member of a racialized minority group experience lower returns in terms of earnings and/or employment when in comparison to those not from this group.

3.4 Description of the Sample

For the purposes of this thesis project, the sample is defined based upon multiple selection criteria. Consequently, the present study is limited to individuals active in the labour force either full-time or part-time, between 25 to 64 years of age (the most typical labour force participation age group), and whose major source of income is derived from

external employment. Additionally, individuals are divided into four tiers based upon the number of immigrants received in Canadian cities as discussed in Chapter 2 and defined below.

The decision to limit the sample to individuals between 25 to 64 years of age is well-documented in past literature (see Adamuti-Trache and Sweet 2005; Li 2008; Buzdugan and Halli 2009) as this is reflective of the general age of the workforce. Exclusion of those under 25 and over 64 years of age is done based upon the logic that respectively, these individuals are likely in school or entering retirement. For the reported source of income, only those whose major source is derived from paid employment are included. Hence, individuals indicating that the majority of their earnings are obtained via self-employment are excluded from the analyses as this group is far more likely to report negative incomes.

For confidentiality purposes, all data resulting from analysis of the EDS master file must be weighted and bootstrapped[7] prior to release from the RDC. Therefore, both the sample weight and bootstrap weights have been applied in all regression analyses, bivariate and univariate statistics. Despite the weighting and bootstrapping, a note of caution is required when interpreting the results. The generalizability of the sample given the exclusion criteria should not be extrapolated beyond the participants in this study as application in other areas may lead to improper conclusions. The dataset and procedures remain, however, the most precise information available on various aspects related to ethnic origin and life in Canada.

[7] Bootstrapping is a re-sampling technique that draws several sub-samples from the full sample. The results are then pooled and analyzed to give a final estimate. In the case of the EDS, 500 samples are produced using certain independent variables from the original sample correcting for the survey sampling plan (Statistics Canada 2003).

3.5 Operationalization of Variables

3.5.1 Dependent Variables

In order to measure the economic returns to education, two dependent variables have been chosen; a) total personal income (ECQ310) and b) employment status (C_FPTIM). In EDS, income is based from the respondents' estimate of total personal income prior to taxes and deductions from all sources in the past 12 months. It is a continuous measure ranging from 0 for no income or reported losses to the highest income (see Table 3). Due to a minority of persons not reporting their income (less than 20% of the sample), two sets of analyses are conducted. The first treats these respondents simply as missing cases and removes them entirely from the analysis. The second scenario relies on regression-based missing value analysis (MVA) to impute values based upon multiple inferential characteristics. Using this sub-sample, those individuals who respond 'don't know' are selected out of the sample while the MVA is conducted for respondents from the 'refused to answer' and 'not asked' categories. For both model options, income is positively skewed and kurtosed above the recommended value of two (see Tabachnick and Fidell 2007). Consequently, the dependent variable requires transformation. Following the recommendations of Tabachnick and Fidell (2007), a square root transformation is selected as the most appropriate solution to non-linearity. The result is a slight negative skew though it and the kurtosis value are within the accepted range.[8] Following multivariate analyses, the decision is made to use the unimputed (first model) income

[8] A second transformation (logarithmic) was attempted to adjust for the slight negative skew, however it only exacerbated the problem.

variable, despite the higher percentage of missing cases, since repeated model tests reveal no difference between equation one and two.[9]

Table 3. Operationalization of variables used in SUDAAN 10.0.1.

Variable	Operationalization
Dependent	
Income	Interval
Employment Status	0=Less than 15 hours worked a week/Not employed, 1=Part-time/Full-time employed
Independent	
Human Capital	
Education	Interval
Origin of degree	
US, UK, Western & Northern Europe, Australia, New Zealand*	1=Yes, 2=No
Canada	1=Yes, 2=No
East & South Europe	1=Yes, 2=No
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	1=Yes, 2=No
Asia & the Middle East	1=Yes, 2=No
Foreign work experience	Interval
Official languages proficiency	Interval
Social Capital	
Associational participation	Interval
Family contact	Ordinal
Religious participation	Ordinal
Trust inventory	Interval
General IVs	
City of residence	0=Tier four/All other locales, 1=Tier one CMAs, 2=Tier two CMAs, 3=Tier three CMAs
Immigration Status	0=Non-immigrant population/Canadian-born, 1=Immigrant population/Foreign-born
Gender	1=Male, 2=Female
Age/Years in Canada	Interval
Discrimination in the workplace or when applying for a job or promotion	1=Yes, 2=No
Occupation	
Management, business, finance & administrative*	1=Yes, 2=No
Health, natural & applied sciences	1=Yes, 2=No
Sales & service	1=Yes, 2=No
Trades, transport, primary industry, manufacturing & utilities	1=Yes, 2=No

* Reference Category

[9] An analysis is conducted to check whether the missing cases in scenario occur randomly or suggests a bias in the sample. Significant chi-square values indicate that the chosen sub-sample selects against unemployed females with a highest level of education attained from one of the following: Elementary-secondary only with secondary school graduation certificate; Elementary-secondary only with trades certificate or diploma; Other non-university only without other non-university or trades certificate or diploma; Other non-university only with trades certificate or diploma; or Other non-university only with other non-university certificate or diploma.

The second indicator of economic performance is employment status. In the EDS the question asks, whether the respondent works full- or part-time weeks in 2000. Full-time in Canada refers to greater than 30 hours of work a week while part-time is defined as less than 30 hours (Kahne 1992; Baker and Benjamin 1994; Kalleberg 2000). For this project, part-time weeks consist of individuals engaged in employment over 15 hours a week but less than 30. In the actual analyses themselves, employment status is dichotomized. Individuals that worked under 15 hours a week are classified as unemployed (coded as "0") while those that indicated working either part-time or full-time weeks during the past year are considered the employed group ("1"). Since the variable is dichotomous, there is no need to deal with issues of non-linearity.

3.5.2 Independent Variables

The primary independent variables involve education including highest level of education and country of origin where education was obtained.

Regarding highest level of education attained, the EDS asks respondents to indicate on a 7-category scale ranging from doctorate, Masters', or a degree in Medicine, Dentistry, Veterinary Medicine or Optometry to 'less than a high school diploma' and no schooling. Though valuable, this dataset also includes a Census-based question that provides a more comprehensive measure of highest level of schooling achieved in the form of a 21-category scale (C_HLOSR). Due to the substantial difference in number of available categories, the Census-based question is treated as an interval measure and is normally distributed.[10]

[10] An alternative measure of schooling is initially considered. A total number of years in schooling are provided in the Census but the measure is collinear with highest level of education attained. Following consultation of the literature (see Walters et al. 2006), it is decided that highest level of schooling is better measure of educational achievement.

The second indicator for education is country where educational credentials were attained (HLOSCDET), which has been well established as having some influence on economic outcome of immigrants (Schaafsma and Sweetman 2001; Ferrer et al. 2006). Due to the lack of sufficient individuals within the regions of origins, the variable was recoded. The detailed list of countries is grouped into 5 dummy coded categories: 1) Canada; 2) United States, United Kingdom, Australia, New Zealand, Western and Northern Europe; 3) South Europe and East Europe; 4) South America, Africa, Bermuda, the Caribbean, the West Indies, and Oceania; and 5) Asia and the Middle East. While at first glance, some of the groupings do not fit in a typical geographic manner, this division reflects a logical means to separate countries based upon the racialized minority status. For example, unlike the rest of Oceania, the majority of Australia and New Zealand's population can be classified as European descent. While from a regional standpoint, Asia may be more closely related to these locales, racialized status dictates priority and leads to these countries' inclusion with other similar demographics. While not a perfect representation, this type of coding scheme has been used by Buzdugan and Halli (2009) among others.

Though measurement of social capital is the primary theoretical framework, any discussion of economic outcome must first take into consideration the presence of human capital factors. Human capital represents the baseline from which to explore the influence of social capital. This type of capital consists of education, work experience, and language ability. Both work experience and language skill are described below. No direct question regarding prior work experience is asked in either the EDS or Census. Consequently, a derived measure is used to best estimate this variable. The standard

practice in current literature is to take age" minus ('years of schooling' + 6) (Li 2003). The belief is that almost all individuals begin school by at least 7 years of age and find employment following departure from school. The operationalization of work experience can be troublesome for two reasons. First, proxy variables, while useful, are still not direct measures of the concept and therefore needs to be recognized as such. Second, the operationalization of work experience represents an imperfect measure as it cannot account for lapses in work history that include spells of unemployment and leaves. Despite its deficiencies, work experience remains an important human capital measure and despite the limitations, its inclusion is necessary as much of the literature regarding economic outcome points to the importance of work experience among immigrants. Furthermore, like most everywhere else in the world, there appears to be a clear distinction between foreign- and host country-based work experience as they are simply valued differently in the labour market (Basran and Zong 1998; Wanner 1998; Buzdugan and Halli 2009). Therefore, Canadian-acquired and foreign-obtained work experience are differentiated among immigrants.

For Canadian-born individuals, Canadian work experience (CWE) is computed by subtracting years of schooling (ED) plus six from age (A):

$$CWE = A-(ED+6)$$

For foreign-born Canadians, if the respondent finished school after immigrating, Canadian work experience (CWE) is computed the same way.

If the immigrant arrived to Canada after finishing school, Canadian work experience (CWE) is calculated by subtracting age at immigration (AI) from age:

$$CWE = A-AI$$

If the respondent immigrated after having finished school, Foreign-work experience (FWE) is computed by subtracting years of schooling plus 6 from age at immigration:

FWE = AI-(ED+6)

If the respondent finished school after immigration, s/he is considered not to have foreign-work experience and is given a value of 0. Due to multicollinearity concerns between CWE, FWE, and age/years in Canada (operationalized below), CWE was excluded for both dependent variables. Even with the exclusion of FWE, the tolerance and VIF scores in baseline models indicate a strong correlation between the FWE and age/years in Canada indicating collinearity.

The third measure of human capital is an indicator of official languages proficiency of EDS respondents. Previous research has documented that knowledge of official languages is a significant predictor of economic performance in the Canadian labour market (Boyd 1999; Kazemipur and Halli 2001). This variable is based upon a composite measure of six EDS variables, from which an index is created. The variables chosen are: a) languages spoken with parents before the age of 15 years (LGPMO); b) languages spoken with siblings before the age of 15 years (LGSMO); c) first languages (LGFO); d) all languages spoken (LGSO); e) languages spoken at home (LGHO); and f) languages spoken with friends (LGFRMO). In order to measure official languages proficiency from low to high, each of these variables is measured on a 3-category scale (1=non-official languages only; 2=official and non-official languages; 3=official languages only). As a result, this index measures the official language proficiency for native- and foreign-born Canadians on a scale ranging from 6 for low proficiency of official Canadian languages to 18 indicating high proficiency. A principal component

factor analysis is conducted revealing that the 6 measures load on a single factor[11]. A check of internal reliability (a standardized Cronbach's alpha=0.947) further confirms the validity of the language proficiency scale.[12]

Social capital encompasses a multitude of dimensions. Thus operationalization of this framework can be rather subjective depending on the explicit focus. In an effort to capture the complex nature of this form of capital, multiple approaches have been developed. In his 2004 paper, Kazemipur identifies three such approaches. Like Kazemipur, for the purposes of this thesis, an Associationist-based approach, developed by Putnam (1995, 2000), is adopted. As described by Wuthnow (2002), the Associationist approach measures social capital on the basis of four indicators; 1) membership in associations; 2) participation in civic activities; 3) level of trust in others; and 4) volunteering. It is with this baseline logic that the measures are selected and bonding and bridging social capital are addressed. The Dysfunctionalist and Network approaches could not be used as variables necessary for their measurement were not available in the EDS.

For the indicator of associational participation, 15 measures are chosen in an effort to establish an index based upon membership in various organizations. These measures each ask 'the frequency of participation in a particular group or organization in the past 12 months'. The measures are: 1) sports club or team (PC40SOR); 2)

[11] The Kaiser-Meyer-Olkin (KMO) score is 0.894, meaning the items measures a common concept. Along with the significant Bartlett's test of sphericity, it is suggested that the correlation matrix is factorable.

[12] A 7th measure, namely language at work (LGWMO), is initially included in the official languages proficiency scale. However, a factor analysis reveals that while this measure did factor on the same loading as the other 6 measures, the value was significantly lower than its counterparts. Moreover, KMO and Cronbach scores confirm that this language indicator did not provide any statistical benefit add anything to the proficiency scale. Subsequently, it was excluded from the proficiency scale.

community organization (PC40COMM); 3) service club (PC40SERV); 4) charitable organizations (PC40CHAR); 5) art, dance or cultural group (PC40ART); 6) hobby club (PC40HOBB); 7) historical or heritage society (PC40HERI); 8) political or citizens' group (PC40POLI); 9) children's school group (PC40CHSC); 10) job related association (PC40JOBR); 11) ethnic or immigrant association (PC40ETHI); 12) self-help or support group (PC40SUPP); 13) environmental/wildlife association (PC40ENVM); 14) social club (PC40SOCI); and 15) school or education group (PC40STUD). A principal component factor analysis reveals that the chosen measures factor on 7 loadings. While the results are significant, they are not substantive. Furthermore, despite a significant Bartlett's test, the KMO is 0.507, which indicates a poor measure of sampling adequacy. Consequently, all measures of associational participation are recoded to reflect yes/no response to engaging in participation. With 15 measures, the potential range is from 0 to 15 for membership in groups or organizations. Therefore, associational participation is treated as an inventory rather than an index. No transformation of the inventory is required as the skew and kurtosis values fall within acceptable range.

The second measure of social capital is family contact. This indicator is based on the EDS question "in the past 12 months how often have you seen, talked to, written or e-mailed these members of your family?" This includes parents, children, brothers, sisters or any other relatives. The third indicator of social capital is religious participation which is measured from the question 'in the past 12 months, how often did you participate in religious activities or attend religious services or meetings with other people, other than for events such as weddings and funerals?' For both the second and third indicator, responses range from 'not at all' to 'at least once a week'.

For the final measure of social capital, the theme of 'trust' is created by using four EDS questions. The first of these ask "generally speaking, would you say that most people can be trusted or that you cannot be too careful in dealing with people?" (TS_Q020). This question is coded one for "yes", or zero for "that you cannot be too careful in dealing with people". The other three questions ask "how much do you trust each of the following groups of people." The groups are as follows: family members (TS_Q030); people in the neighbourhood (TS_Q040); and those in the work place (TS_Q050). Each of these questions are measured on a five-point scale, ranging from 'people cannot be trusted at all' to 'people can be trusted a lot'. The intention is to establish a new index ranging in value from 3 to 16. Though none of the individual questions has a significant number of missing cases to stop from going forward, the combination of missing cases did present an issue. Consequently, the missing cases are imputed with the series mean value for each individual question. A factor analysis of the four measures indicates that they do load significantly on a single factor. However, despite a significant Bartletts's test, the KMO value is 0.693 while a test of reliability resulted in a standardized alpha of only 0.640. These values suggest that while there is definitely correlation between the 4 measures of trust, but it is inappropriate to classify it as an index. Therefore, the measures are considered as an inventory of trust that is normally distributed.[13]

[13] The EDS provides a composite measure based upon the averages of the last three questions (which reduced to a number out of 5). Taking this guideline into account and readjusting for the fourth measure with slight modifications (i.e. removal of the mixed sense of trust category), the inventory value is still kept out of 16. Therefore, any score between 12 and 16 are considered to have a strong sense of trust; between 8 and 11 is having a medium sense of trust; and values ranging from 3 to 7 are considered to have a weak sense of trust.

As stated previously, all individuals under 25 and over 64 are excluded from the analyses accounting for 31.3% of the weighted population. Despite the truncated range, AGE is normally distributed and therefore requires no transformation. For the 'class of worker', all respondents who report that the majority of their earnings are obtained via self-employment are removed. This exclusion represents 9.4% of the weighted population.

The following variables serve as grouping measures which allow for comparison between the sub-samples. The two measures are CMA living at time of response (CACMA) and immigration status (IMMSTAT) judged on the grounds of nativity. In terms of city of residence, the top twenty-four immigrant-receiving CMAs are initially chosen based upon data from the 2001 and 2006 Censuses. For the purposes of this project, Montreal, Toronto, and Vancouver are classified as 1st-tier cities; Calgary, Ottawa-Gatineau, Edmonton, Winnipeg, and Hamilton are the 2nd-tier centres; and Kitchener, Windsor, London, Quebec, St. Catharines-Niagara, Victoria, Abbotsford, Oshawa, Guelph, Sherbrooke, Kelowna, Saskatoon/Regina, Kingston, and Barrie are the 3rd-tier Canadian CMAs. Due to no information on CMAs within the Atlantic region, Halifax is removed as a 3rd-tier centre resulting in analysis of 23 specific cities. The definition of 1st-, 2nd-, and 3rd-tier CMAs originate from Frideres (2006) who defines each of the tiers by the number of recent immigrants (1996-2001) each city receives. Therefore, operationalization of the three tiers follows his guidelines though this definition has been expanded to include those arriving between 1991 and 2006 (see Table 1). Tier one cities are the largest receivers of migrants at over 150,000 while 2nd- and 3rd-tier CMAs have 45,000-150,000 and 5,000-40,000 immigrants respectively. In an effort to be thorough, a 4th-tier, termed "All other locales" is included as well. It comprises the

remaining locations in Canada, which consists of CMAs, Census Agglomeration (CA), and Census metropolitan area and census agglomeration influenced zones (MIZ). Because Halifax cannot be distinguished from the Atlantic Provinces, it is collapsed within this 4th-tier category as are all CMAs and non-CMAs in these provinces.

Immigration status is classified in three categories: 'non-immigrant population', 'immigrant population', and 'non-permanent residents'. These non-permanent residents include respondents who held student or employment authorizations, Minister's permits or who were refugee claimants, as well as family members living with them (Statistics Canada 2002). Due to the nature of this third group and the negligible effect on the overall sample size (around 1%), non-permanent residents are treated as missing cases and excluded from the regression analyses.

Filter variables include: sex (SEX); a measure of years in Canada; occupation (SOCSUM); and a measure of discrimination in the workplace or when applying for a job or promotion (DIS_PL22).[14] Operationalization of variables used in final models appears in Table 3.

The inclusion of 'sex' is a common practice in immigration research due to the strong relationship it has with economic outcome (see Boyd 1999; Li 1991, 2003a; Buzdugan and Halli 2009). Likewise, the number of years living in Canada would also appear to have a relationship with the financial well-being of immigrants. In order to allow for comparison between native- and foreign-born Canadians for length of stay in Canada, a measure is constructed. Years in Canada are equal to the respondents' age for Canadian-born while for the foreign-born, their time in the country is obtained by

[14] Furthermore, two other measures are intended to be included but are forced to be removed. These are: a detailed list of countries for origin of birth (PBDET) and a constructed racialized minority status.

subtracting the age at arrival (IMMAGE) from the respondents age. The construct is a normally distributed, continuous measure. In future reference, this measure is referred to as 'Age/Years in Canada' in an effort to avoid any confusion between immigrant and non-immigrant Canadians.

Occupation is measured using the standard occupational classification. This variable is dummy coded into the following four categories; 1) management, business, finance & administrative; 2) health, natural & applied sciences, social sciences, education, government, art, culture recreation and sports occupation; 3) sales & service; and 4) trades, transport, equipment operators, processing, primary industry, manufacturing & utilities.

The final measure incorporated is a perception of discrimination at work or when applying for a job or promotion. The indicator is derived from a series of EDS questions regarding places or situations where discrimination or unfair treatment takes place. It serves as a proxy measure of racialized minority status as the initial indicator (explained below) could not be included in the analyses. It is important to note that while this variable is intended to serve as an indicator of radicalized status, it is a proxy measure based upon perception. Therefore, while it is the best available measure from the EDS, it still is a limited indicator.

Additional variables had been intended to be included into the multivariate analyses however for varying reasons, they cannot be used. Unfortunately, due to multicollinearity concerns with origin of degree, as well as a few other measures, country of origin is excluded in the multivariate component of the analyses, though a vast

majority of individuals were born in the country in which they were originally educated so this variable does serve as a proxy for country of origin.

The derived racialized minority indicator is established based upon religious affiliation (RELSUM) and country of origin. This variable has to be removed due to issues of collinearity with years in Canada, official languages proficiency, and certain categories of origin of highest level of schooling obtained. Hence, discrimination in the workplace is used in its place as a measure of racialized status.

3.6 Data Analysis

Measurement of economic outcome in relation to educational achievement in Canadian CMAs among immigrant and non-immigrant Canadians proceeds through a multivariate examination in the form of a series of multiple regressions. Before the multivariate stage, univariate and bivariate analyses are performed for descriptive and diagnostic purposes.

The multivariate component of the analysis consists of a series of hierarchical ordinary least squares (OLS) regressions for income and a series of hierarchical logistic regressions for employment status. Since income is continuous, OLS regressions are deemed to be an appropriate method for statistical analysis. Moreover, OLS regressions afford the ability to measure the effect of each independent variable and theoretical effect on income, while controlling for the other independent variables. For employment status, logistic regressions are a robust analysis technique, which allow for prediction of membership in one of the two categories that constitute the dependent variable.

The procedure for both types of regressions is relatively similar though there are slight modifications based upon the dependent variable. Essentially, baseline models are run for immigrant and non-immigrant Canadians in the four tiers using a set list of

variables. In this phase, analyses are run first without social capital indicators and then following their inclusion. Subsequently, examination of foreign-born Canadians is undertaken in a more in-depth manner through the addition of further independent variables. Again, analyses are conducted first without and then with social capital indicators.

For total personal income over the past 12 months, the first step of the OLS regressions consists of the examination of the following variables: highest level of schooling obtained, origin of said education, sex, gender, official languages proficiency, and age/years in Canada. Step two introduces the four social capital measures. The immigrant-only models take into account all previous variables as well as include perceived discrimination at the workplace and foreign work experience[15].

The procedure for the logistic regression analyses is altered slightly. Due to insufficient numbers for origin of highest level of education attained for Canadian-born, only Canada is included in the baseline analyses. Moreover, due to collinearity between official languages proficiency and age/years in Canada, an interaction term is established. For the immigrants-only models, the additional categories of highest level of schooling obtained are introduced as well as FWE and discrimination in the workplace. Another issue of multicollinearity arises following incorporation of these variables. Foreign work experience shows a strong correlation with official languages proficiency, and age/years in Canada. Consequently, a series of interaction terms are created to resolve if any of the

[15] Despite best attempts, minimal collinearity is still present in the OLS regression models. For baseline models, the outlier TOL and CIF scores are as follows: for foreign-born in tier 3, 0.487 and 2.052 for official languages proficiency. For the immigrant-only models, the values are as follows: in tier 3, 0.486 and 2.057 for official languages proficiency and 0.469 and 2.133 for age/years in Canada. For 'All other locales', age/years in Canada is 0.427 and 2.342. While tricky, none of these values seriously impede the model.

cross-products are significant as well as to determine if any of the measures require exclusion from the multivariate stage. The final decision results in an interaction term between official languages proficiency and FWE, with age/years in Canada as its own measure[16].

All assumptions of the OLS regressions are met. At the univariate level, all included measures display enough variation within their attributes and are normally distributed. For the bivariate, the assumptions of linearity and homoschedasticity are satisfied. Finally, at the multivariate level, Mahalanobis and Cook's distance indicate the lack of presence of severe multivariate outliers. Therefore, no deletion of cases is required. Regarding the logistic regression, since this statistical technique is considered robust, it does not require the same satisfaction of assumptions as with the OLS regressions. Nevertheless, all required elements are met.

The software package utilized is SPSS 17 and PASW 18 for all univariate, bivariate and multivariate analyses. An additional statistical program in the form of SUDAAN 10.0.1 is used to bootstrap the models. All data is weighted before release from the RDC according to Statistics Canada guidelines.

3.7 Strengths and Limitations

The Ethnic Diversity Survey has numerous strengths. The most obvious is its coverage of demographic, social and economic indicators. Since place of birth, ethnic origin, and parents' place of birth were all used in the process of selection, a wide array of individuals from diverse cultural and ethnic backgrounds distributed throughout the country are recognized (Walters et al. 2007). This is especially important considering the

[16] Initially, a cross-product of all three predictors along with each combination of two was set-up and included in the logistic regressions. The only significant pairing was official languages proficiency and foreign work experience though it was specific to tier and nativity status.

reputation of Canada as a culturally diverse nation. Furthermore, because the dataset is selected based upon multiple characteristics across the country, the population substrata are large enough to make good statistical and comprehensive comparisons, such as between immigrant and non-immigrant Canadians (Buzdugan 2006). The final benefit of dataset like the EDS is that it is collected and organized by Statistics Canada. Statistics Canada is widely recognized as an international leader in this field and thus the data quality is considered to be especially reliable.

Despite its strengths, the EDS as well as some of the measures and data analysis techniques utilized are imperfect. First, the sampling frame excludes a number of individuals and groups, most notably, persons under the age of 15, Aboriginal Peoples, persons living in collective dwellings, Indian reserves, or in the territories and remote areas. Another drawback regarding the sampling method is that because this survey is based upon a two-phase stratified sampling design, there is an increase in the likelihood of sampling error (Buzdugan 2006). An example of this is the oversampling of peoples identified as not possessing non-Canadian, non-British, and non-French origins. The result is a sample non-representative of the Canadian population.

There are further limitations to this study besides the database itself. To start, with, the statistical analyses conducted are secondary in nature. Use of a secondary data source results in an inherent limitation as the survey was not designed by me or with my specific research objectives in mind. Consequently, certain elements that may be deemed important in my research study could not be included. Additionally, since the variables selected to be included in the dataset do not necessarily correspond with certain

sociological theories, certain liberties may have be taken when operationalizing measures (i.e. discrimination in the workplace as a proxy measure of racialized minority status).

This chapter has described the dataset, selected measures, research design, and statistical analysis techniques employed in this thesis. The next chapter examines the findings.

Chapter Four: Results and Discussion

The first three sections of this Chapter outline the outcomes of the univariate, bivariate, and multivariate analyses. The chapter ends with a discussion of the main research findings as they relate to human capital theory and social capital framework, as well as current Canadian immigration literature.

4.1 Results of the univariate analysis

4.1.1 Descriptive statistics and comparison of immigrants and non-immigrants

The highest mean income value among non-immigrants in Canada is among those living in 1st-tier cities, with an average personal income of $40,281.90 per year (see Table 4). For the other tiers, the mean earnings decrease. The lowest average income is amongst those residing within 4th-tier locales at $30,213.70 per year. This fits known patterns among income and geography in Canada where those living in the 1st- and 2nd-tier average more years in schooling than those in the two other tiers (13.4 years in comparison to 12.9 and 12 years of schooling respectively). Education has been previously established as being a strong predictor of earnings in the human capital perspective.

For immigrants, the average earnings across the tiers are relatively close to one another (see Table 5). Immigrants in the 2nd- and 3rd-tiers have the highest mean incomes of the four groups with corresponding earnings of $33,713.60 and $32,679.20 respectively, while the weakest outcome appears in the 4th-tier ($31,355.40). This corresponds with average years of schooling that are relatively consistent throughout the country. Immigrants who settle in one of the five 2nd-tier cities on average possess 13.4 years of schooling while those living in tier three have 0.5 less years of education.

Table 4. Mean, standard deviation, skewness, and kurtosis for interval level variables for Canadian-born population between 25-64 years of age, who are not self employed.

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Canadian-born population				
Tier One				
Income	40,281.90	34233.557	5.303	80.034
Total school years	13.4	3.886	-.492	1.530
Language index	17.4	1.685	-3.105	9.647
Age/years in Canada	42	10.751	.194	-1.009
Associational participation inventory	0.4	.622	1.234	1.175
Trust inventory	12.6	2.208	-.690	.543
CWE	22.5	18.159	.693	-.314
Tier Two				
Income	40,013.20	31196.094	2.040	9.612
Total school years	13.4	3.688	-.572	2.409
Language index	17.6	1.366	-3.944	16.604
Age/years in Canada	41.8	10.652	.296	-.894
Associational participation inventory	0.5	.689	1.203	1.196
Trust inventory	13	2.111	-.872	1.284
CWE	22.4	17.881	.733	-.265
Tier Three				
Income	36,028.10	27928.922	2.121	10.841
Total school years	12.9	3.673	-.490	2.126
Language index	17.7	1.045	-4.932	27.386
Age/years in Canada	43.1	10.854	.134	-1.028
Associational participation inventory	0.5	.663	1.215	1.359
Trust inventory	12.9	2.182	-.710	.468
CWE	24.6	18.178	.544	-.522
Tier Four/All other locales				
Income	30,213.70	24315.571	2.472	22.731
Total school years	12	3.546	-.550	1.843
Language index	17.8	.874	-6.876	53.875
Age/years in Canada	43.8	10.845	.050	-1.036
Associational participation inventory	0.5	.699	1.233	1.077
Trust inventory	13.1	2.192	-.825	.728
CWE	26.8	18.817	.399	-.730

*Please note all values are significant ($p < 0.001$)

In the top three tiers, Canadian-born peoples hold a distinct advantage in terms of mean income above their foreign-born equivalents. The greatest disparity between the two groups appears in the 2nd-tier as native-born Canadians earn on average $6299.60

more than their immigrant counterparts. Alternatively, the lowest differential in mean income is observed within the 3rd-tier as non-immigrants average $3348.90 more than immigrants. Tier four is the only location where immigrants have higher mean incomes than those Canadian-born ($31,355.40 to $30,213.70).

An examination of the native-born population reveals little variation in Canadian work experience between non-immigrants in the first two tiers with an average over 22 years of experience. Corresponding with a decreased number of years in school, 3rd- and 4th-tier Canadian-born citizens have increased levels of job experience with reported values of 24.6 years and 26.8 years accordingly.

Canadian-based work experience is highest among immigrants outside of the top 23 immigrant-receiving centres. Immigrants in the 4th-tier average 35 years of work experience. Not surprisingly, 1st-tier migrants generally possess the least amount of Canadian-based experience of all groups in the country, though they still average 20.7 years of on the job training. The conundrum is that despite increased levels of Canadian-based experience, migrants in these smaller tiers have lesser mean earnings than their counterparts in the larger immigrant-receiving CMAs.

Immigrants in 1st-tier centres average roughly eight years of foreign-acquired job experience. This human capital measure declines for each successive tier from 6.6 years for those in the tier two CMAs to 4.2 years for 4th-tier migrants. Despite the varying levels of FWE, earnings are relatively consistent throughout the country. To summarize, immigrants living in smaller cities have less work experience than those living in larger centres.

Table 5. Mean, standard deviation, skewness, and kurtosis for interval level variables for Immigrant population between 25-64 years of age, who are not self employed.

Variable	Mean	SD	Skewness	Kurtosis
Immigrant population				
Tier One				
Income	32,165.70	29594.323	5.091	86.459
Total school years	13	4.635	-.691	.786
Age at arrival	25.5	14.043	.585	.490
Language index	11.1	3.970	.716	1.730
Age/years in Canada	19.1	12.831	.518	-.891
Associational participation inventory	0.3	.554	1.771	-.658
Trust inventory	12.7	2.186	-.814	3.242
Foreign work experience	8	9.064	1.359	.931
Canadian work experience	20.7	16.81369	-.408	4.160
Tier Two				
Income	33,713.60	31250.192	2.068	7.834
Total school years	13.2	4.375	-.392	.929
Age at arrival	22.9	13.402	.488	.280
Language index	11.6	3.905	.587	-1.063
Age/years in Canada	21.9	14.418	.329	-.870
Associational participation inventory	0.4	.582	1.454	1.724
Trust inventory	13.2	2.002	-.661	.098
Foreign work experience	6.6	8.459	1.544	2.397
Canadian work experience	24.1	17.121	.227	.812
Tier Three				
Income	32,679.20	28856.423	1.866	8.185
Total school years	12.4	4.608	-.486	.848
Age at arrival	22.2	13.896	.565	.479
Language index	12.5	4.238	.227	3.695
Age/years in Canada	24.5	14.824	.130	-1.521
Associational participation inventory	0.4	.641	1.627	-.965
Trust inventory	13.1	2.012	-.697	2.592
Foreign work experience	6.2	8.094	1.713	.505
Canadian work experience	28.5	19.193	-.095	1.662
Tier Four/ All other locales				
Income	31,355.40	26611.176	.958	1.136
Total school years	12.4	4.086	-.396	.753
Age at arrival	20.1	13.290	.596	.430
Language index	13.9	3.987	-.282	-1.425
Age/years in Canada	31.3	14.442	-.337	-.678
Associational participation inventory	0.4	.605	1.366	1.601
Trust inventory	13.7	1.828	-.885	.831
Foreign work experience	4.2	6.191	1.606	2.310
Canadian work experience	35	19.248	-.510	2.181

*Please note all values are significant ($p < 0.001$)

The average age of Canadian-born people ranges between 41.8 years for those living in tier one centres to 43.8 years for 3rd-tier cities. For immigrants, the mean for time spent in the country varies notably between tiers. Those in the 1st-tier average 19.1 years in Canada while 4th-tier migrants average 31.3 years. Similar to CWE, a strong proportion of new immigrants settle in the 1st-tier so it is not surprising that the average time spent in country is lower in this tier than elsewhere in the country.

Immigrants in the 4th-tier generally come to Canada at a younger age than those in the rest of the country. The average age of arrival is 20.1 years old. The oldest arriving cohort is for those settling in the gateway CMAs by over five years (i.e. 25.5).

Not surprisingly, Canadian-born workers, regardless of location in the country, average over 17 (out a possible 18) on the official languages proficiency scale, indicating a strong grasp of English and/or French. The highest reported average of official language proficiency is found in the 4th-tier; these individuals generally score 17.8. The lowest reported average is found amongst Canadians living in 1st-tier centres, though the difference is only 0.4. Such high scores are to be expected from individuals born and raised in Canada. The language scores for immigrants are not nearly as high; the strongest outcomes are seen amongst 4th-tier migrants with an average a value of 13.9, while those residing in gateway CMAs score 11.1.

Membership in organizations or groups is nearly identical for both immigrants and non-immigrants across Canada. For Canadian-born, the score is between 0.4 (1st-tier) and 0.5 (everywhere else) while the corresponding values are 0.3 and 0.4 for those originating outside of Canada. Thus out of 15 possible organizations or groups, both

immigrants and non-immigrants alike average membership in less than one organization or group.

Scores on the trust index show no real difference for non-immigrants across Canada. Native-born Canadians in the 4th-tier scored highest with an average of 13.1 out of a possible 16. This suggests that non-immigrants generally have a strong sense of trust in relation to others. Gateway CMAs have the lowest reported scores across the country (12.6). For foreign-born Canadians, the pattern is similar with respective values of 13.7 and 12.7. Strangely enough, immigrants report a stronger sense of trust in comparison with their Canadian-born counterparts in each tier although the gap is rather minimal.

Table 6. Difference of means and t-test of significance between Canadian-born and Immigrants, for interval level variables.

Variables	**Differences of means between Canadian-born and Immigrants**			
	Tier One	**Tier Two**	**Tier Three**	**Tier Four**
Income	8116.20	6299.60	3348.90	1141.70
Total school years	0.4***	0.2	0.5*	-0.4**
Language index	6.3	6	5.2	3.9
Age/years in Canada	22.9***	19.9*	18.6*	12.5
Associational participation inventory	0.1	0.1	0.1	0.1
Trust inventory	-0.1	-0.2	-0.2	-0.6

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.

4.2 Results of the bivariate analysis

Tables 7, 8, and 9 present the results of the bivariate analysis. Table 7 shows the percentages of immigrant and non-immigrants employed throughout Canada distinguished by gender. Among those Canadian-born, a greater percentage of males to females are employed full-time. The largest gap appears in 3rd- and 4th-tiers with differences of 9.9% and 9.3% respectively. The smallest difference among Canadian-born is in the 1st-tier (4.1%). Conversely, females in each of the tiers are more likely to be unemployed or work less than 15 hours per week. The highest percentage is among

4th-tier women. An examination of immigrants reveals a similar trend is present in this group, as there are greater percentages of males employed full-time than females regardless of location in the country. The most noticeable disparity is in the 4th-tier where 36.9% of immigrant men work full-time while 21.4% of women possess full-time jobs. Additionally, migrant females show a greater propensity to be unemployed in each of the four tiers. The highest unemployment is for 3rd-tier immigrant females with a value of 20.6%.

Table 7. Percentage for weighted cross-tabulations and chi-square test of significance for Canadian-born and Immigrant for gender, location and employment status aged 25-64, who are not self-employed.

Nativity status	**Gender**	**Employment status**	**Location**			
			Tier One	**Tier Two**	**Tier Three**	**Tier Four**
Canadian-born	**Male**	**Full-time employment**	38.3	39.3	40.1	37.2
		Part-time employment	3.1	2.8	2.2	2.3
		Not applicable < 15 hours worked	5	3.8	5.3	6.8
		% Male	46.4	45.9	47.6	46.3
	Female	**Full-time employment**	34.2	34.7	30.2	27.9
		Part-time employment	8.8	9.4	11.3	11.4
		Not applicable < 15 hours worked	10.6	10	10.9	14.4
		% Female	53.6	54.1	52,4	53.7
		Total %	100	100	100	100
Immigrant	**Male**	**Full-time employment**	35.3	37.2	36.3	36.9
		Part-time employment	2.7	2.1	2.9	2.6
		Not applicable < 15 hours worked	6.6	5.8	5	7.1
		% Male	44.6	45.1	44.2	46.6
	Female	**Full-time employment**	32.7	29	27.5	21.4
		Part-time employment	7.1	10	7.7	12
		Not applicable < 15 hours worked	15.6	15.9	20.6	20
		% Female	55.4	54.9	55.8	53.4
		Total %	100	100	100	100

*Please note all values are significant ($p < 0.001$)

Table 8 displays the results of the analysis between gender, location, nativity status, and income. In each tier, the most common income for Canadian-born males is within the '$52,000 or more' earnings bracket. The highest reported percentages among this group are from the 1st- and 2nd-tier with 18.1% and 18% respectively. Native-born males throughout the country are also unlikely to be in the '$0 to $12,999' earnings category. Alternatively, Canadian-born females are more likely to be in this lowest earnings bracket and less likely to make $52,000 or more. The most pronounced example is within the 4th-tier, as 20.4% of Canadian-born women make $12,999 or less while only 3.5% of women qualify in the top earnings category. This pattern is nearly identical for both immigrant men and women. Males are more likely to be in the top earnings bracket while females are consistently in the lowest. The lone exception is for females in 3rd-tier cities as income within '$39,000 to $51,999' is the least likely outcome though income of '$52,000 or more' is a close second.

Table 9[17] presents the outcome of the trivariate analysis between gender, location, and educational level. Both men and women living in tier one centres are most likely to have an educational level commensurate with 'non-university only with trades certificate, diploma, or other non-university certificate' with corresponding values of 9.3% and 10.9%. This pattern remains the same for males living in the 2nd- and 3rd-tier and for females in 3rd- and 4th-tiers. For women in the 2nd-tier, the most common reported level of education is 'non-university without other non-university or trades certificate or

[17] Please note that because of confidentiality issues, the outcomes of immigrants and non-immigrants cannot be distinguished.

diploma' at 12.8%. For males in the 4th-tier, 12.3% indicate a schooling level of 'high school education without certificate (includes no schooling)'.

Table 8. Percentage for weighted cross-tabulations and chi-square test of significance for Canadian-born and Immigrant for gender, location, nativity status, and income aged 25-64, who are not self-employed.

Nativity status	Gender	Income	Location			
			Tier One	Tier Two	Tier Three	Tier Four
Canadian-born	**Male**	**$0 - $12,999**	4.3	3.4	4.5	4.6
		$13,000 - $25,999	5.8	4.8	5.7	8.7
		$26,000 - $38,999	8.2	8.3	9.4	11.3
		$39,000 - $51,999	11.2	11	13.1	10.3
		$52,000 or greater	18.1	18	15.7	12.2
		% Male	47.6	45.5	48.4	47.1
	Female	**$0 - $12,999**	12.9	15.2	15.8	20.4
		$13,000 - $25,999	9.8	9.1	11.8	14.2
		$26,000 - $38,999	12.4	11.9	11.4	9.6
		$39,000 - $51,999	9.5	9.8	7.9	5.2
		$52,000 or greater	7.8	8.5	4.7	3.5
		% Female	52.4	54.5	51.6	52.9
		Total %	100	100	100	100
Immigrant	**Male**	**$0 - $12,999**	5.9	4.4	3.5	4.1
		$13,000 - $25,999	8	10.3	8.9	7.4
		$26,000 - $38,999	10.1	7.5	6.5	10.9
		$39,000 - $51,999	9.3	8.8	10.9	9
		$52,000 or greater	12.6	15.2	15.2	17.1
		% Male	44.9	46.2	45	48.5
	Female	**$0 - $12,999**	19.7	21	21.7	25.6
		$13,000 - $25,999	11.8	13.6	13.7	11.7
		$26,000 - $38,999	10.8	7	10.6	6.3
		$39,000 - $51,999	7.2	6.6	3.4	4.4
		$52,000 or greater	4.6	5.6	5.6	3.5
		% Female	54.1	53.8	55	51.5
		Total %	100	100	100	100

*Please note all values are significant ($p < 0.001$)

Table 9. Percentage for weighted cross-tabulations and chi-square test of significance for gender, location, and education level aged 25-64, who are not self-employed.

Gender	Education level	Location			
		Tier One	Tier Two	Tier Three	Tier Four
Male	**High school education w/o certificate (includes no schooling)**	8	7.5	7.8	12.3
	High school w/ secondary graduation certificate, trades certificate or diploma	7.3	7.7	9.1	10.4
	Non-university w/o other non-university or trades certificate or diploma	3.4	3.4	3.2	2.9
	Non-university only w/ trades certificate, diploma, or other non-university certificate	9.3	12.8	12.9	11.9
	University w/ or w/o certificate, diploma, university certificate below bachelor level	5.7	6.5	4.8	3.4
	University w/ bachelor or first professional degree	7.9	9	6.1	3.6
	University w/ university certificate, master's or doctorate degree	4.1	4.6	3.2	1.8
	% Male	45.7	51.4	47.1	46.3
Female	**High school education w/o certificate (includes no schooling)**	9.8	7.7	10.7	13.7
	High school w/ secondary graduation certificate, trades certificate or diploma	9.3	3.4	10.4	10.4
	Non-university w/o other non-university or trades certificate or diploma	3.7	12.8	3.5	3.4
	Non-university only w/ trades certificate, diploma, or other non-university certificate	10.9	6.5	13.1	14.2
	University w/ or w/o certificate, diploma, university certificate below bachelor level	7.1	9	6.1	5.2
	University w/ bachelor or first professional degree	9.5	4.6	6.1	5.1
	University w/ university certificate, master's or doctorate degree	4	4.6	3	1.7
	% Female	54.3	48.6	52.9	53.7
	Total %	100	100	100	100

*Please note all values are significant ($p < 0.001$)

4.3 Results of the multivariate analysis for personal income

This section outlines the results of the OLS regressions for total personal income.[18] The goal is to determine whether personal income varies among immigrants in tiers two and three centres when compared to those living in the larger 1st-tier CMAs in order to establish a more comprehensive understanding of the overlooked and under-evaluated foreign-born populace that resides outside of Montreal, Toronto, and Vancouver. This section also compares the financial returns for immigrants versus non-immigrants throughout Canada.

4.3.1 Personal Income

The results of the baseline OLS regressions for personal income distinguish between those born in Canada and those from outside the country. Table 10 presents the model fit scores for the four baseline models. The weakest model fit, although still quite respectable, appears amongst the Canadian-born living in tier one cities as the independent predictors account for 25.2% of the variance in personal income among Canadian-born peoples. The best model fit is amongst the Canadian-born living in the 4th-tier, as the variables explain over 38% of the variation in personal income. The results for tier two and three are relatively similar at 29.2% and 29.4% respectively. An examination of the R-Square change reveals that the indicators of social capital exert only a small influence on employment income ranging in a variance explained between one and two percent. It is an early indication that social capital has little influence on personal income, a fact discussed later in this chapter.

[18] All regression results are weighted and bootstrapped using SUDAAN. As a result, standardized beta regression coefficients are unavailable as the feature is not present in this particular software.

Table 10. A baseline comparison of the multiple R-Square values for weighted and bootstrapped models for OLS regressions.

Variables	Canadian-born			Immigrant		
	without Social Capital in model	with Social Capital in model	R-Square change	without Social Capital	with Social Capital	R-Square change
Tier One	0.242	0.252	1.0	0.359	0.364	0.5
Tier Two	0.276	0.292	1.6	0.417	0.432	1.5
Tier Three	0.274	0.294	2.0	0.512	0.511	-0.1
Tier Four/All other locales	0.371	0.381	1.0	0.456	0.467	1.1

Assessment of the model fit for immigrants using data from Table 10 reveals that models are a better predictor for this group than for the Canadian-born cohort. The 1st-tier has the lowest model fit for those born outside of Canada, accounting for 36.4% of variance in personal income, while the best model fit is 51.1% among immigrants living in tier three. The greatest R-Square change when social capital variables are added is for 2nd-tier immigrants with an in improvement from 0.417 to 0.432. Alternatively, the predictive power of social capital is reduced to nothing for 3rd-tier migrants.

The models presented in Table 11 include additional predictors such as foreign work experience and perceptions of discrimination on the job which are not included in the models discussed above and which exclude Canadian-born participants (for obvious reasons). Inspection of the R-Square values for the immigrant-only models (see Table 11) indicates that despite the presence of additional immigrant-specific variables, the model-fit statistics do not change substantially from those obtained with the baseline equations. The influence of social capital among immigrants appears to be almost negligible throughout the country. In both the baseline and immigrant-only models, the strongest model improvement reported is 1.5% following the inclusion of social capital indicators within the 2nd-tier. As a result, despite the inclusion of the new immigrant-

specific variables, the social capital variables remain weak predictors of employment income among immigrants.

Table 11. The multiple R-Square values for weighted and bootstrapped models for OLS regressions for Immigrant-only models.

Variables	Immigrant		
	without Social Capital in the model	with Social Capital in the model	R-Square change
Tier One	0.361	0.366	0.5
Tier Two	0.430	0.445	1.5
Tier Three	0.512	0.512	0.0
Tier Four/All other locales	0.457	0.469	1.2

4.3.2 Influence of control variables on income

Occupation proves to be one of the strongest predictors of total personal income regardless of city of residence. Employment in the health, natural, or the applied sciences is responsible for the highest reported values among immigrants in every tier. In each case, immigrants out-earn their native-born counterparts. The lowest return is in the 1st-tier, as immigrants earn an additional $62.65 which is almost $25 more than what their Canadian-born equivalents generate in scientific disciplines (see Table 12). The greatest returns in this field appears in the 2nd-tier, as foreign-born workers earn $75.25[19] as compared to $38.96 among Canadian-born (see Table 13) constituting a $36.29 difference. The earnings gap is also in migrants' favour in the 3rd- and 4th-tiers (see Table 14 & 15). Inclusion of foreign work experience and perception of discrimination have little effect on the income of immigrants (see Table 16). Only foreign-acquired work experience in the 2nd-tier is significant, with a reported negative value of $1.60.

Those migrants in the trades, transports, primary industry, manufacturing, and utilities sector garner the second highest earnings boost, but only in the first three tiers. Immigrants in the trades, transport, primary industry, manufacturing and utilities sector

[19] Please note that due to transformation of income, obtained dollar values are actually squared. Nevertheless, these are the values reported.

have the greatest economic returns by living in tier three cities. Immigrants in the 3rd-tier made an additional $69.35 for working in this industry, while their non-immigrant counterparts in tier two make only $28.77. The largest difference in income between immigrants and Canadian-born counterparts is in the 3rd-tier, where foreign-born workers earn $24 more than those born in Canada. Conversely, native-born workers in this sector out-earn migrant earners living in the 4th-tier by a margin of just under $3.

Immigrants employed in sales or services gross more than their native-born regardless of location in the country though the wage gap narrows in comparison to the other occupations. At its greatest, immigrants earn $8 more than their Canadian-born counterparts in 3rd-tier cities. Gender is also a central indicator of earnings. Men are routinely the beneficiaries of an earnings boost when compared to women regardless of whether or not they were born in Canada. Canadian-born males possess a greater advantage than immigrants in the 1st- and 3rd-tiers, while the opposite is true in the 2nd- and 4th-tiers. Though native-born males make more than their counterparts, the gap is under two dollars in the 1st- and 3rd-tiers, while the income gap is greater in the 2nd- and 4th-tiers. In the 2nd-tier, foreign-born males report a beta of $67.51 as opposed to $53.72 for Canadian-born. The 4th-tier shows an even greater disparity as immigrants receive $24.87 more than their counterparts. Following the introduction of the two immigrant-specific predictors, all immigrant males slightly increase their earnings. The most pronounced of these is in the 2nd-tier with an increase of nearly one dollar.

Table 12. Unstandardized beta coefficients and standard error for weighted and bootstrapped baseline models with total personal over 12 months in Tier One.

Variable	Tier One			
	Canadian-born N=2,354,830		Immigrant N=1,535,420	
	B	SE	B	SE
Intercept	39.34	25.36	23.15	13.12
Highest level of education attained	4.38***	0.38	3.54***	0.30
Origin of education^				
Canada	12.72	17.67	-9.54	6.02
East & South Europe	43.17	34.28	-13.79*	6.53
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	-19.02	39.08	-14.37*	6.51
Asia & the Middle East	11.46	32.64	-18.14**	6.44
Official languages proficiency	-1.02	0.76	2.37***	0.49
Associational participation	7.69**	2.77	6.22*	2.73
Family contact	3.34*	1.39	2.69**	0.94
Religious participation	-2.62*	1.20	-0.09	0.94
Trust	1.76*	0.75	0.07	0.67
Gender^				
Male	47.05***	3.61	45.34***	3.38
Age/Years in Canada	0.66***	0.14	1.30***	0.15
Occupation^				
Health, natural & applied sciences	37.76***	3.89	62.65***	3.87
Sales & service	26.93***	4.16	32.26***	3.86
Trades, transport, primary industry, manufacturing & utilities	36.99***	4.52	52.62***	3.80

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

Not surprisingly, educational achievement is a significant predictor of income throughout all models. With each increase in the level of education, both immigrants and non-immigrants benefit. In the case of immigrants, the strongest educational influence is for those residing in the 3rd-tier as they made an additional $3.79 for each level of

education achieved. For Canadian-born living in the 2nd-tier, the educational advantage is highest at $4.60. Centres in the 2nd-tier are also the sites with the greatest variation gap in educational returns between immigrants and non-migrants; nearly two dollars in favour of native-born Canadians. The fifteen CMAs comprising the 3rd-tier symbolize the only locations where education is more beneficial for immigrants than for Canadian-born, though the gap is small, 63 cents. This also represents the closest outcome of all the tiers; otherwise, the returns to education are lower for immigrants than Canadian-born in all other centres. Immigrant-only models reveal that values change slightly with the presence of new predictors. Immigrants in the 1st- and 2nd-tier lost 20 and 51 cents, respectively. Those in the 3rd-tier cities gain eight cents, while 4th-tier migrants add a mere two cents.

The labour market has differential returns based on where education is obtained. Education from Canada and East and Southern Europe leads to positive returns of $55.93 and $55.71 respectively for Canadian-born citizens in tier two CMAs. However in 3rd-tier centres, native-born Canadians are the recipients of a nearly $58 earnings penalty when obtaining highest level of education in East and Southern Europe. For immigrants living in Montreal, Toronto, and Vancouver, education from outside Canada results in negative consequences. The worst result is attained from education from Asia and the Middle East with an $18.14 penalty. In short, education from abroad decreases income for immigrants, an issue seen in other studies and which is discussed in this chapter's conclusion.

Immigrants living in both 1st- and 2nd-tier CMAs are the only groups to experience the effects of knowledge of official Canadian languages. Immigrants in the

2nd-tier earn $3.30 for each level of fluency improvement in English or French. When discrimination and foreign work experience are controlled, this 'advantage' declines to $2.90. Immigrants in gateway centres also show a positive relationship at the baseline though they make nearly a dollar less than their cohort in the non-gateway cities.

Table 13. Unstandardized beta coefficients and standard error for weighted and bootstrapped baseline models with total personal over 12 months in Tier Two.

Variable	**Tier Two**			
	Canadian-born N=1,289,810		**Immigrant N=381,200**	
	B	**SE**	**B**	**SE**
Intercept	-40.33	34.08	-29.58	27.53
Highest level of education attained	4.60***	0.50	2.67***	0.62
Origin of education^				
Canada	55.93**	20.19	10.73	10.60
East & South Europe	55.71*	23.61	17.75	13.31
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	-145.95	141.88	10.02	15.00
Asia & the Middle East	38.10	29.58	0.40	11.35
Official languages proficiency	0.65	1.11	3.30***	0.98
Associational participation	7.01*	2.81	14.23*	5.65
Family contact	1.20	2.38	0.55	1.75
Religious participation	-4.77***	1.29	-1.65	1.61
Trust	1.87	1.03	2.51	1.49
Gender^				
Male	53.72***	4.51	67.51***	6.79
Age/Years in Canada	1.06***	0.21	0.92***	0.27
Occupation^				
Health, natural & applied sciences	38.96***	4.73	75.25***	8.49
Sales & service	15.25**	5.76	23.12***	6.85
Trades, transport, primary industry, manufacturing & utilities	28.77***	5.65	42.56***	8.22

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

The combined effects of age and years in Canada are consistently significant throughout the country among both groups. The lone exception is for immigrants outside of the three tiers. As time in Canada increases, so does income for all immigrants, though this is especially strong for those living in 1st-tier cities. For each additional year in the Canada, immigrants gross an additional $1.30. This is followed by tier three immigrants with a beta of 1.02. The weakest significant returns are for 2nd-tier immigrants as they reported an increase of 92 cents for each year spent in the country. The greatest disparity is also in the 1st-tier as native-born Canadians make 64 cents less than immigrants in these cities. Despite holding an advantage in the 2nd-tier, non-immigrants earn just 14 cents more than immigrants which mark the smallest significant gap between the two groups. Canadian-born workers living in 4th-tier locales took home just 47 cents for each year increase in age.

The first of the immigrant-specific variables and the last of the human capital measures, foreign work experience, demonstrates itself a weak predictor of income. Only immigrants in the 2nd-tier have a significant outcome. The impact is negative as increased levels of foreign experience acquired outside of Canada leads to an earnings punishment of $1.60. The second of the immigrant-specific variables is perceptions of discrimination in the workplace or when applying for a job or a promotion. None of the four models are statistically significant for this variable.

Table 14. Unstandardized beta coefficients and standard error for weighted and bootstrapped baseline models with total personal over 12 months in Tier Three.

Variable	Tier Three			
	Canadian-born N=1,414,210		Immigrant N=236,530	
	B	SE	B	SE
Intercept	-12.82	37.42	14.67	34.46
Highest level of education attained	3.16***	0.51	3.79***	0.77
Origin of education^				
Canada	15.40	17.58	17.06	11.93
East & South Europe	-57.94*	23.22	-12.55	14.29
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	28.14	16.95	7.47	15.97
Asia & the Middle East	17.87	23.94	-9.24	15.68
Official languages proficiency	-0.12	1.64	1.55	1.23
Associational participation	6.66*	3.15	5.09	5.70
Family contact	3.79	2.19	-2.19	2.01
Religious participation	-1.96	1.16	-1.04	2.27
Trust	3.54***	0.98	0.66	1.50
Gender^				
Male	52.67***	4.43	52.21***	7.49
Age/Years in Canada	0.75***	0.18	1.02***	0.30
Occupation^				
Health, natural & applied sciences	48.44***	5.19	73.75***	8.94
Sales & service	26.43***	6.44	34.92***	8.26
Trades, transport, primary industry, manufacturing & utilities	45.27***	5.51	69.35***	9.67

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

All four indicators of social capital are significant in the employment income models, though their effects are weak. Associational participation, and by proxy bridging social capital, has the strongest impact of earnings in each of the tiers for the Canadian-born. For non-immigrants, regardless of location, each additional membership in a group or organization yielded between \$6.66 (3^{rd}-tier) and \$7.69 (1^{st}-tier) earnings boost.

Conversely, social capital influences income for immigrants living only in tiers one and two and its impact is mixed. Immigrants in the 1st-tier earned $1.47 less due to associational participation than non-immigrants. Foreign-born workers in the 2nd-tier, however, report a beta of $14.23 which is actually twice as much as their Canadian counterparts, meaning associational participation is economically more valuable, though the effect is small. The addition of the two immigrant-specific variables results in an income increase of 64 cents in tier two yet a decrease of a $1.67 in gateway CMAs. Associational participation has no appreciable effect on the incomes of migrants living in tiers three and four.

Frequency of family contact is relevant in three out of eight cases, though mainly for those born in Canada. In tier one and four, increased interaction with family members leads to a corresponding earnings improvement of $3.34 and $4.36 among non-immigrants. Family contact only economically aids immigrants living in the 1st-tier. This indicator of bonding social capital results in the lowest return of three significant categories. This value decreases by only 8 cents when the immigrant-specific variables are added to the model.

Religious participation and trust are each noteworthy in only two cases. Increase in the frequency of participation in religious activities results in negative returns for non-immigrants in the 1st- and 2nd-tier cities. Those with high rates of religious participation living in the 2nd-tier tier have incomes that are $4.77 lower than Canadian-born workers with infrequent religious attendance. Among those born in Canada, reporting increased levels of trust result in an income increase of $1.76 and $3.54 for 1st- and 3rd-tier centres.

Neither of the measures demonstrates any significance for immigrants. These variables have no influence on the income of immigrant workers regardless of place of residence.

Table 15. Unstandardized beta coefficients and standard error for weighted and bootstrapped baseline models with total personal over 12 months in 'Tier Four /All other locales'.

Variable	Tier Four/All other locales			
	Canadian-born N=3,924,280		Immigrant N=230,050	
	B	SE	B	SE
Intercept	10.84	22.16	66.27	39.08
Highest level of education attained	3.94***	0.27	2.36**	0.86
Origin of education^				
Canada	0.27	10.20	-9.58	9.36
East & South Europe	0.00	0.00	-19.87	14.48
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	23.64	25.72	-11.50	16.42
Asia & the Middle East	0.00	0.00	-16.86	16.73
Official languages proficiency	0.58	1.01	-0.86	1.21
Associational participation	7.47***	1.70	-0.85	5.90
Family contact	4.36***	1.02	1.86	2.46
Religious participation	-0.15	0.74	-4.11	2.38
Trust	0.33	0.57	0.45	1.91
Gender^				
Male	53.61***	2.72	78.48***	8.35
Age/Years in Canada	0.47***	0.12	0.58	0.32
Occupation^				
Health, natural & applied sciences	60.18***	3.05	80.54***	10.31
Sales & service	33.95***	3.06	36.88***	8.78
Trades, transport, primary industry, manufacturing & utilities	54.01***	3.24	51.49***	9.10

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

Table 16. Weighted and bootstrapped OLS regressions for Immigrant-only models.

Variable	Immigrant							
	Tier One N= 1,535,420		Tier Two N=381,200		Tier Three N=236,530		Tier Four/All other locales N=230,050	
	B	SE	B	SE	B	SE	B	SE
Intercept	29.38*	13.51	0.46	27.62	7.98	34.48	73.63	39.74
Highest level of schooling	3.34***	0.32	2.16***	0.62	3.87***	0.81	2.38**	0.89
Origin of education^								
Canada	-11.39	6.09	2.54	10.94	18.98	11.81	-13.53	9.97
East & South Europe	-13.25*	6.52	17.15	13.26	-12.46	14.45	-16.58	14.50
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	-14.07*	6.54	11.00	14.46	6.25	16.36	-10.45	16.64
Asia & the Middle East	-17.40**	6.45	-0.12	11.15	-9.37	16.19	-15.60	16.94
Official languages proficiency	2.32***	0.49	2.90**	0.99	1.67	1.22	-0.85	1.23
Foreign work experience	-0.44	0.23	-1.60***	0.42	0.44	0.73	-0.81	0.79
Associational participation	6.02*	2.76	14.87**	5.62	5.45	5.64	-1.04	6.05
Family contact	2.61**	0.94	-0.26	1.74	-2.18	1.99	1.89	2.47
Religious participation	-0.10	0.94	-1.85	1.61	-1.02	2.28	-4.15	2.38
Trust	0.25	0.66	2.78	1.49	0.58	1.55	0.50	1.90
Gender^								
Male	45.62***	3.39	68.50***	6.60	52.28***	7.62	78.91***	8.44
Years in Canada	1.20***	0.60	0.62*	0.27	1.09***	0.31	0.47	0.35
Occupation^								
Health, natural & applied sciences	62.16***	3.86	74.25***	8.55	73.82***	8.81	79.82***	10.66
Sales & service	31.50***	3.85	22.42***	6.74	34.35***	8.67	36.92***	8.90
Trades, transport, primary industry, manufacturing & utilities	51.47***	3.82	40.50***	8.01	69.15***	9.95	52.04***	9.57
Discrimination ^	3.43	4.15	5.16	10.04	3.44	16.39	-2.80	15.79

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

4.4 Results of the multivariate analysis for employment status

The following section outlines the findings from the logistic regression models of employment. Recall that the dependent variable is acquisition of part-time or full-time employment. Table 17 shows both Nagelkerke R-Square and Cox and Snell R-Square

values for baseline logistic regression models. Table 18 displays the two types of R-Squares for immigrant Canadians only.[20] All further discussion of R-Square values refers to the Nagelkerke value.

4.4.1 Employment

The goodness of fit statistics in Table 17 indicates that in three of the four models, the selected predictors of employment account for more variance among Canadian-born peoples than for immigrants. In the 1st-, 2nd-, and 4th-tiers, the models explain over 30% of the variance for native-born Canadians (i.e. 0.327, 0.315, and 0.403). The lone model in which the predictors are more successful for immigrants than for non-immigrants is for the 3rd-tier. This also marks the strongest model for migrants with a reported Nagelkerke R-Square of 0.462 as well as the greatest variation between the two groups.

Table 17. Nagelkerke R squares and Cox and Snell R square for baseline logistic regression models with employment status.

Variables	Canadian-born				Immigrant			
	without Social Capital		with Social Capital		without Social Capital		with Social Capital	
	Nagelkerke R-Square	Cox & Snell R-Square	Nagelkerke R-Square	Cox & Snell R-Square	Nagelkerke R-Square	Cox & Snell R-Square	Nagelkerke R-Square	Cox & Snell R-Square
Tier One	0.315	0.181	0.327	0.189	0.281	0.181	0.286	0.185
Tier Two	0.304	0.167	0.315	0.174	0.251	0.163	0.260	0.167
Tier Three	0.343	0.202	0.350	0.206	0.458	0.309	0.462	0.312
Tier Four/All other locales	0.390	0.252	0.403	0.262	0.370	0.255	0.381	0.261

The inclusion of the immigrant-specific predictors (namely foreign work experience, discrimination, and education acquired outside of Canada) modestly improves the model fit in all but the 3rd-tier tier and is shown in Table 18. The most

[20] Nagelkerke values are provided from weighted models in SPSS while Cox and Snell values accompany the output of the weighted and bootstrapped models in SUDAAN. Due to the higher values, only Nagelkerke R-Square values are discussed.

substantial increase appears among migrants living in the 4th-tier at a 5.6% increase over the previous model. Comparable to the situation found among the income models, social capital adds relatively little to the unknown variance of employment status for Canadian- and immigrant-born workers. Among the Canadian-born, social capital explains between 1.2 and 1.3 percentage points of employment status regardless of tier of residence. Focusing on the base model for migrants, the effect of social capital increases the probability of being employed among immigrants living in tiers one and three by 0.5 and 0.4% respectively. The 4th-tier shows the most change in employment with a 1.1% gain in variance. With the addition of immigrant-specific predictors, the most appreciable contribution of social capital appears in the 4th-tier though this increase is only 1.1%. Similar to the analysis of income discussed above suggests social capital is a poor predictor of employment among immigrants.

Table 18. Nagelkerke R-Square and Cox and Snell R-Square for Immigrant-only logistic regression models with employment status.

Variables	Immigrant			
	without Social Capital		with Social Capital	
	Nagelkerke R-Square	Cox & Snell R-Square	Nagelkerke R-Square	Cox & Snell R-Square
Tier One	0.300	0.193	0.304	0.197
Tier Two	0.273	0.177	0.279	0.180
Tier Three	0.457	0.313	0.462	0.317
Tier Four/ All other locales	0.426	0.293	0.437	0.301

4.4.2 Influence of control variables on employment

Similar to total personal income, occupational categories represent the strongest indicators of employment status. Working in health, natural, and the applied sciences are beneficial for native-born citizens living in MTV as they are over 9 times more likely to find work than those working in other fields (see Table 19).

Table 19. Weighted and bootstrapped baseline logistic regression models for Tiers' One and Two.

Variable	Tier One		Tier Two	
	Canadian-born N=2,771,490	Immigrant N=1,839,670	Canadian-born N=1,453,840	Immigrant N=433,390
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Intercept	0.23*	0.68	0.31	0.61
Highest level of schooling	1.11***	1.10***	1.12***	1.04
Origin of education				
Canada	1.76	1.43*	1.34	1.16
Official languages proficiency* Years in Canada	1.00	1.00	1.01	1.00
Official languages proficiency	0.92*	1.04	0.91	1.07
Associational participation	1.07	1.00	1.28	0.95
Family contact	1.09	1.10**	1.06	1.08
Religious participation	0.92	0.99	0.96	0.94
Trust	1.10**	0.99	1.10	1.05
Gender				
Male	1.47*	1.46**	1.63*	1.85*
Age/Years in Canada	0.94***	1.00	0.93***	1.00
Occupation				
Health, natural & applied sciences	9.07***	5.35***	5.78**	6.16***
Sales & service	7.80***	6.75***	5.68***	6.89***
Trades, transport, primary industry, manufacturing & utilities	8.14***	12.23***	11.93*	10.34***

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

Working in the life sciences is favourable for migrants as well, by a margin of 5.78. This effect declines to 5.21 times when discrimination and foreign work experience are added to the immigrant models. Life science professionals also benefit in the 3rd-tier among the Canadian-born. Those working in this field are 19.45 times more likely to be working, though the advantage for immigrants is much smaller at 4.71 (see Table 20).

Immigrants working in this field are almost 5 times more likely to be working once the immigrant-specific predictors are controlled (see Table 21). In 2nd-tier cities, immigrants working in life sciences hold a slight advantage over non-immigrants. Immigrants are 6.16 times more likely to be working compared to 5.78 for non-immigrants. In 4th-tier centres, immigrants do even better; they are over 100 times more likely to find employment in these locales while non-immigrants report a significantly lower probability of employment (18.86). The likelihood of finding some form of paid work increases to nearly 106 times when discrimination and foreign work experience are added to the migrant models.

Immigrants living in the 1st- and 3rd-tiers are more likely to find employment in the trades, and transport sector than those born in Canada, while they are at a disadvantage elsewhere in the country. The best opportunity for employment in this type of work among immigrants is for those living in 3rd-tier CMAs where they are almost 82 times more likely to find a job. Tier four represents the lowest odds for this group, with a value of 5.19.

The trend for those working in the health, natural, or the applied sciences is similar for sales and services in the baseline models. Employment opportunities in this field favour the Canadian-born over those born outside the country living in the 1st- and 3rd- tiers. Within Montreal, Toronto, and Vancouver, immigrants and the Canadian-born are between 7 and 8 times more probable of finding a job. These odds improve for both groups living in the 3rd-tier with corresponding scores of 10.49 and 13.49 for immigrants and the Canadian-born. Tier two immigrants show a slight edge over non-immigrants with an odds ratio of 6.89 compared to 5.68. Within the 4th-tier, immigrants have a

substantial employment advantage over non-immigrants as they are 18 times more likely to be employed. In sum, the likelihood of finding work increases significantly in all locations outside of the 1st-tier for all immigrants.

Table 20. Weighted and bootstrapped baseline logistic regression models for Tiers' Three and Four/All other locales.

Variable	Tier Three		Tier Four/All other locales	
	Canadian-born N=1,653,910	Immigrant N=272,780	Canadian-born N=4,454,530	Immigrant N=264,840
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Intercept	0.05*	0.11	0.69	1.08
Highest level of schooling	1.07**	1.08*	1.08***	0.99
Origin of education				
Canada	8.88*	3.58***	0.52	1.70
Official languages proficiency* Years in Canada	1.00	0.99*	1.01	1.00
Official languages proficiency	1.01	1.06	0.78*	1.03
Associational participation	1.12	1.07	1.31***	1.00
Family contact	1.11	1.03	1.10	0.94
Religious participation	1.00	0.93	1.02	1.17
Trust	1.07	1.09	1.09**	0.95
Gender				
Male	1.52*	2.28	1.34*	3.64***
Age/Years in Canada	0.95***	0.96*	0.93***	0.97*
Occupation				
Health, natural & applied sciences	19.45***	4.71*	18.86***	101.73***
Sales & service	13.47***	10.49***	9.23***	18.54**
Trades, transport, primary industry, manufacturing & utilities	13.14***	81.95***	23.17***	5.19*

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.
^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

Gender continues to be a consistent predictor of employment status. Only migrants living in 3rd-tier centres experience no gender effects.[21] For the most part, being male positively predicts the probability of employment and there are differences by tier of residence. In the 1st-tier, likelihood of being employed is almost identical for the Canadian- and immigrant-born males with values almost near 1.5. Immigrant males in 2nd- and 3rd-tier locales are twice more likely to be employed than females in the same tier, similar to the pattern seen amongst Canadian-born. The influence of gender increases when foreign work experience and discrimination are added to the models. In Montreal, Toronto, and Vancouver, the improvement for males is very slight (i.e. 1.47 to 1.54) while in the 2nd-tier, the odds of being employed remained at 1.85. The relationship between gender and employment is also significant in the fifteen 3rd-tier CMAs. The most appreciable increase is for men in the 4th-tier with a final value of 4.09. The implications of the effects of gender are discussed at the end of the chapter.

The effect of schooling is an important influence for employment among all native-born Canadians, but its presence is somewhat muted for immigrants as only those living in the 1st- and 3rd- tiers improve their odds of finding a job. The highest return of education is for native-born workers living in tier two with an employment benefit of 1.12. Among immigrants, the best return on education in finding work is in the 1st-tier with a value of 1.10. In the models that account for foreign work experience and discrimination, the benefit of education slightly decreases the probability of finding work in the gateway

[21] Following the addition of foreign work experience and perceived discrimination, the odds ratio (2.60) becomes statistically relevant.

centres from 1.10 to 1.08. In sum, there appears to be a slight but statistically significant penalty for work experience obtained outside of Canada in terms of employment.

In the baseline models for immigrants, education acquired in Canada significantly increases the chances of being employed. Immigrants in the 1st- and 3rd-tiers find that their propensity to be employed increases by 1.43 and 3.58 times (see Table 19 & 20 respectively) when their education was attained in Canada. For those born in Canada, only schooling obtained in Canada matters and this is just for those living in 3rd-tier cities. These individuals are nearly 9 times more likely to find work than those educated elsewhere. Following the addition of the remaining regions of schooling, the relationship between origin of education and employment disappears for immigrants in the 1st-tier indicating that there is no association between the two. Education from Canada remains significant for 3rd-tier migrants though the logged odds ratio declines from 3.58 to 2.63.

The interaction term of official languages proficiency and age/years in Canada only has an appreciable influence for immigrants living in the 3rd-tier. This indicates that one of the predictors moderates the effect of the second when factoring in employment status. A closer assessment of variables reveals that in MTV, both measures slightly decrease the likelihood of finding employment for the Canadian-born. Knowledge of official Canadian languages decreases employment slightly (0.92) meaning that those having lower proficiency in French or English are penalized when looking for work. The effect of the cross-product of age/years in Canada also has a negative effect on employment status (0.94), meaning that those who are older and who have spent more time in Canada

are less likely to be employed. This outcome is similar in the 4th-tier as increased levels of official languages proficiency and age/years in Canada individually reduce employment probability. The trend of decreasing odds for time spent in the country is also applicable for tier four immigrants as well as 2nd- and 3rd-tier non-immigrants.

The product of the combined official languages proficiency and foreign work experience term is only significant for migrants living in the 2nd- tier. Knowledge of official Canadian languages helps immigrants in the 1st-tier increasing the probability of being employed by 1.23 times. Immigrants with prior work experience outside of the country have lower odds of finding gainful employment, decreasing the probability of finding work to 0.86.

Examination of perceptions of discrimination in the workplace results in a consequential outcome only amongst immigrants residing in the 1st-tier. Interestingly enough, individuals who perceived to be discriminated at work when other factors are controlled are actually 1.62 times more likely to find work, a result discussed later.

Of the four indicators of social capital, trust is statistically relevant in two models, while frequency of family contact and associational participation affect employment probabilities among the Canadian-born only once. Among these non-immigrants, trust is equally beneficial towards gaining employment amongst those living in the 1st- and 4th-tiers (1.10 and 1.09 respectively). For immigrants, family contact increases the chances of finding work by 1.10 times among those living in the 1st-tier. As found in the income models, social capital influences on employment among the Canadian-born and immigrant born are weak, at best.

Table 21. Weighted and bootstrapped Immigrant-only logistic regression models for all tiers.

Variable	Immigrant			
	Tier One (N=1,839,670)	**Tier Two (N=433,390)**	**Tier Three (N=272,780)**	**Tier Four/All other locales (N=264,840)**
	Odds ratio	**Odds ratio**	**Odds ratio**	**Odds ratio**
Intercept	0.24	0.01**	0.00**	0.00*
Highest level of schooling	1.08***	1.02	1.05	0.98
Origin of education				
Canada	1.22	0.76	2.63*	0.73
East & South Europe	0.72	0.74	0.83	0.62
South America, Africa, Oceania, the Caribbean, Bermuda, the West Indies	1.20	1.02	2.23	1.57
Asia & the Middle East	1.05	0.82	0.94	1.66
Official languages proficiency* Foreign work experience	1.00	0.99*	1.00	1.00
Official languages proficiency	1.23*	0.69	1.27	0.89
Foreign work experience	0.99	0.91**	0.96	0.86**
Associational participation	1.01	0.98	1.10	1.04
Family contact	1.10**	1.06	1.02	0.89
Religious participation	0.99	0.96	0.95	1.16
Trust	1.02	1.05	1.12	0.97
Gender				
Male	1.54***	1.85*	2.60*	4.09***
Years in Canada	1.00	0.99	0.98	0.96*
Discrimination	1.62*	1.18	2.87	0.55
Occupation				
Health, natural & applied sciences	5.21***	6.58***	4.97*	105.96***
Sales & service	6.57***	6.76***	12.45**	22.18**
Trades, transport, primary industry, manufacturing & utilities	12.00***	10.03***	83.65	8.24**

*Significant at p<0.05, **significant at p<0.01, ***significant at p<0.001.

^Please note that values listed for all dummy coded measures are indicative of a yes response or membership in that category. The reference category is a 'no' response.

4.5 Discussion

It is no surprise that occupation exerts significant influence on both earnings among immigrants. Occupation is largely the result of a number of factors including labour skill-set, education, knowledge of host country languages, and prior work experience. It is the culmination of these factors that leads to higher incomes, and due to the highly regulated nature of certain professions, keeps the supply of workers low and the demand high. For example, medical practitioners spend many years in school learning and refining their particular skill-sets and as a result, are economically rewarded for this investment (i.e. higher annual incomes). Resultantly, certain professions are far more likely to find work given the control of professional organizations. Though it represents a broad field of professional occupations, such as doctors and engineers, membership in this grouping generally requires post-secondary or graduate level education (Reitz 2007b). Accordingly, the earnings in this field are consistently higher than in any of the other listed groupings. Conversely, earnings in sales and services or within the trades and transport sector are lower as these jobs do not necessarily need the same educational or professional demands (i.e. certification) and therefore lack the same earnings potential. As Fong and Cao (2009:92) explain, "professional occupations are usually associated with greater prestige, stable career path, and, most importantly, higher income." Consequently, the earnings gap between these fields represents the normal labour market distinctions for the particular education and skill-sets. However, because of the way in which the jobs are grouped in this study, the outcomes for particular occupations are unknown.

The most interesting findings amongst the earnings regressions is the outcomes of those living in the 2nd- and 3rd-tier,working in the health, natural sciences, and the applied

sciences. Immigrants out-earn their native-born counterparts in these tiers, and outperform other immigrants working in the health fields who are living in Montreal, Toronto, and Vancouver as well. While not a huge advantage, it may be reflective of the scarcity of applicants (Canadian- and immigrant-born) in 2nd- and 3rd-tier centres. Thus the premium paid to lure immigrants with specializations to smaller cities, a possible positive outcome for the Provincial Nominee Programs. It would appear then that the PNPs are most beneficial for cities within these two tiers, though more so in the 3rd-tier judging by educational returns. Past research (see Halliday 2006) has shown that the number one reason immigrants settle in smaller urban centres is due to the presence of employment opportunities, something the leaders of 2nd- and 3rd-tier cities can use to advertise their locales to prospective immigrants.

Although the outcome of the analyses with total personal income would seem to suggest an earnings edge for immigrants living in each of the tiers, the results of the logistic regression illustrate that although average income may be greater, the chance of finding employment may not. Immigrants living in the 1st- and 3rd-tiers are less likely than their Canadian-born counterparts to find employment in all but the trades and transport field. This seems to partially support Bauder's (2003:183) analysis of 1st-tier CMAs, as the author explains that, "immigrants, particularly women, may be disadvantaged in large immigrant gateway cities, where immigrant communities facilitate entry into sweat-shop employment and low-paying wholesale, trade and service occupations." This confirms what is seen for health, natural sciences, and the applied sciences although the expectation is that immigrants will instead hold an advantage over non-immigrants in both remaining fields (i.e. sales and services and trades and transport).

However, Zietsma's (2007) analysis of the Labour Force Survey shows that as of 2006, sales and service jobs are the most widely-held occupation in Canada, not only for immigrants but among those Canadian-born as well. While there is severe overrepresentation among immigrants in these types of jobs, especially those who have recently arrived (Galarneau and Morisette 2008), it is important to remember that foreign-born workers still represent a minority in the Canadian labour market in terms of numbers and are under-represented within higher earning labour positions (Aydemir and Skuterud 2008). Strangely enough, outside of 1st- and 3rd-tiers, employment in trades and transports is the only field in which immigrants are at a disadvantage compared to native-born Canadians when trying to find a job. It is unclear as to the specific reasons why this is the case but it can be speculated that the labour market of the different tiers dictates the available employment opportunities. Additionally, it is possible that within the 2nd- and 4th-tier locations, the level of discrimination towards migrants in this field is higher than in comparison to the other two tiers and is consequently reflected within the employment odds although this is beyond the scope of the present study.

The importance of gender to economic outcome is well recognized. There is a steady trend within both immigration and non-immigration literature that suggests that the returns for females are significantly different than for males, regardless of country of origin (Boyd 1984, 1999; Li 2001, 2003a; Bauder 2003; Zietsma 2007). A vast majority of studies find that women, especially if foreign-born, are the recipients of an economic penalty both in terms of employment and earnings. The results of this project support the observation that regardless of nativity or location of residence in the country, men hold a significant edge in both earnings and employment odds. Being a female results in a

substantial disadvantage as they "experience the restrictions of a sex segregated occupational structure in which women's jobs are characterized by lower wages, less opportunity for advancement, and less job security." (Boyd 1984:1093) For immigrant females, this disadvantage is further compounded by place of birth, as many foreign born women trying to break into the labour marker must also contend with the assigned gender roles found within familial units. As explained by Long (1980:624) and reiterated by Duleep and Sanders (1993:680), "wives in immigrant families that have recently entered the United States may have to work to help finance their husbands initial investments in schooling or job skills required in the U.S. labor markets. Later, as earnings of their spouses rise with time in the United States, foreign-born wives reallocate their time from market to nonmarket activities and their earnings are reduced." This family investment strategy means that many immigrant women may initially take lower-paying jobs to support their husband and family while additionally taking on the responsibilities of "the second shift," Arlie Hochschild's (1990) idea that women in the paid labour market return home to assume an unequal and unpaid portion of the familial responsibilities. With this "double duty", women have less time and energy to seek better employment options, improve proficiency of host languages, or improve upon previous skill-sets, resulting in poorer earnings and employment options later on. The "double negative" of sex and place of birth can be further impacted by membership of a racialized minority group, which is referred to as a "triple disadvantage" (Raijman and Semyonov 1997). Similar, to the "double disadvantage", the effect cannot be distinguished in this study. Nevertheless, membership in any one these categories can negatively influence economic

outcome; however, membership in both or all three multiplies the effect substantially (Boyd 1984).

As expected, education also plays a role in economic outcome. Estimates in Canada among native-born indicate an earnings benefit of about 8-10 percent for each additional year of education (Lemieux and Card 2001; Riddell 2004; Aydemir and Skuterud 2005). However, multiple studies have pointed to the devaluation of human capital among immigrants with education acquired abroad (see Li 1992; Frenette and Morissette 2003; Sweetman 2004; Buzdugan and Halli 2009). Accordingly, the first postulate of this thesis is concerned with the value of educational achievement. It is believed that despite equivalent levels of schooling, immigrants would show lower economic returns than their native-born counterparts throughout the twenty-three selected cities. The results of the regression analyses largely validate this hypothesis. Excluding the 3rd-tier, education has a greater return to income among those born in Canada over those born elsewhere. Immigrants living outside 3rd-tier centres do not have a positive return on education when looking for work. Why might immigrants in 3rd-tier centres have a positive return on education when their counterparts living elsewhere do not? Data from the LSIC suggests that employment opportunities are the likeliest reason for settling in these cities (Halliday 2006). Combined with an aggressive commitment on the part of many smaller CMAs to utilize the PNP to attract immigrants, this may be a signal that migrants may be more occupationally fulfilled if they choose to live there instead of the bigger cities.

The second hypothesis proposed is that there should be no difference in economic returns for education between immigrants in 1st-tier cities and migrants living in other

places. The results of the income equations confirm this. Though there are slight variations in earnings, its effect overall appears minimal. There is no doubt that education is a positive predictor to the value of schooling in relation to earnings for immigrants when residing in one of these twenty-three cities. The strongest earnings returns to education is for immigrants within the 3rd-tier. The disappointing observation is that education makes only a small contribution to income and employment among immigrants when compared to Canadian-born. There are two competing explanations for this. First, perhaps the quality of education attained abroad has questionable effect on obtaining employment, or second, that there exists covert discrimination amongst employers who are less likely to hire those educated abroad. Unfortunately, it is not possible to dissect this effect in this thesis.

Education proved to be a significant predictor of employment status only for immigrants living in the 1st-tier. This is hardly a surprising finding. Gateway cities are home to 62.9% of all immigrants in Canada, creating a competitive job market where investment in human capital may lead to an edge when searching for a labour position, especially among migrants. Haan's (2008) research supports these findings by noting that unemployment rates are higher for immigrants living in these three cities than in the other CMAs. Immigrants living in smaller tiers do not face the same levels of competition for jobs (either from Canadian or immigrant-born) and thus have an easier time finding employment. Immigrants having difficulty finding employment are also more likely to move if they are living in a 3rd- or 4th-tier location. Canada's 1st-tier cities are the economic centres of the country and accordingly, immigrants face stiff opposition not only from increasingly educated Canadian-born citizens but from other immigrants

(Reitz 2007a). However, there is another plausible explanation. As stated earlier, the primary reason for settlement in 1st-tier cities is the presence of family, friends, or communal support (Schellenberg 2004). A proportion of those that choose to settle in these cities do so in order to enjoy larger ethno-cultural, religious, family and communal networks found in tier one CMAs. In the process, these migrants are willing to 'sacrifice' employment opportunities to satisfy this desire for other aspects of a 'good life'. In other words, access to jobs or good paying employment cannot fully explain internal migration behaviour among immigrants.

Origin of education proves to be a reliable predictor of economic outcomes among immigrants. When factoring in origin of education among immigrants, all degrees obtained outside of Canada, including those from Southern and Eastern Europe are valued less than schooling from Western and Northern Europe. This, to some extent corroborates Buzdugan and Halli's (2009) findings of devaluation of education obtained outside of Canada, USA, Western and Northern Europe though their study distinguishes between short- and long-term migrants and not between place of residence. Sweetman's (2004) research concludes that variations in the returns to foreign education across source countries are related to differences in school quality in the country of origin. The results remain consistent with these beliefs as non-traditional source country institutions are often deemed to be of lesser quality (Reitz 2007a). There is, however, an additional explanation that may partially explain what is observed. Discrimination based upon racial origin, skin colour, and possessing an accent have all been previously cited as potential reasons for both decreased earnings and weaker employment chances (Henry and Ginsberg 1985; Basran and Zong 1998; Li 2001) although the extent of this

disadvantage is still debated (Reitz 2007a). Nevertheless, multiple studies (for example, Pendakur and Pendakur 1998, 2002; Reitz and Banerjee 2007) report that racialized minorities are the recipients of poorer economic returns in relation to both earnings and employment. Thus discrimination's influence on economic outcome should be recognized.

As for paid employment, only education gained in Canada significantly aided the search for paid work among immigrants. In the end, the results did not appear to deviate much from the literature regarding origin and earnings (Sweetman 2004; Buzdugan and Halli 2009; Chiswick and Miller 2009). Schooling from the US, Western and Northern Europe, and Australia are generally considered by prospective employers and various professional organizations to be first-rate educations relative to the rest of the world although these educations may not necessarily be as valued as much as a Canadian-based education in the country's labour market. Nevertheless, origin of education appears to be a somewhat important predictor for 1st-tier immigrants.

As has been the case with past findings, the results reveal either no relationship or a negative outcome between foreign work experience and economic returns. Generally speaking, foreign work experience obtained outside of Europe and North America is of little worth in the Canadian labour market (see Schaafsma and Sweetman 2001; Green and Worswick 2002, 2004; Reitz 2007a, b; Li 2008). The literature often cites the value of Canadian-based experience, which is increasingly becoming an important prerequisite for both employment and earnings, when discussing immigrants (Schaafsma and Sweetman 2001; Green and Worswick 2002; Li 2008). In the end, like origin of education, prior work experience benefits the individual in the points selection system for

entrance into the country yet its effect is either negligible or serves as a hindrance for economic returns.

Knowledge of one or both official languages is found to be a significant forecaster of economic returns. Boyd and Cao (2009) cite three reasons why this is the case. First, it enables communication between the individual and those around them in the labour market. This leads to increased productivity which eventually translates into better earnings (Chiswick and Miller 2002). Second, this type of knowledge compliments education allowing for better marketing utilization in the labour market (see Park 1999; Chiswick and Miller 2002; Bleakley and Chin 2004). Lastly, proficiency in English and French seems to exert some influence on the type of jobs obtained (Boyd 1999). The authors (2009:67) note that "immigrants with low levels of language proficiency may cluster in jobs where destination-language proficiency does not matter for job performance, even though they may be overqualified for these jobs in terms of their other human capital endowments such as educational achievements." The real interest from the results is that employment and income benefits are not distributed evenly. Immigrants living in the 2nd- and 3rd-tier have earnings benefit while those in the 1st-tier are more likely to find employment. The earnings advantage experienced may have something to do with the reasons for settlement in these cities. Pre-arranged employment implies a better grasp of one or both official languages and consequently, the earnings reward. For employment, the shear number of potential workers makes employment in these labour markets highly competitive. Hence this particular human capital measure seems to serve as an advantage.

The third hypothesis surmises that immigrants residing in Montreal, Toronto, or Vancouver would have a greater advantage in economic return in comparison to those living elsewhere in the country, since they would possess stronger social connections and networks from which to improve economic performance. Given that research in the past decade which suggests that migrants move to larger centres to enjoy the larger community and family networks, this seems to be a plausible hypothesis. The results of this analysis partially refute this as indicators of social capital are significant in both the 1st- *and* 2nd-tier. However, judging by R-Square change for each of the models, social capital has little influence on income regardless of place of residence. Nevertheless, the results obtained partially support Nakhaies' (2007) study though the author found trust to be significant while this study discovered only bridging and bonding social capital to be of concern. Moreover, in agreement with Nakhaies' (2007:320) conclusions "findings suggest that social capital helps improve the earnings of immigrants and visible minorities (Boxman et al. 1991; Lamba 2003), *although its role tends to be weak* (emphasis mine), particularly in comparison with human capital." However, his research found social capital significant based upon gender, ethnoracial origins, and birth while excluding region and city of origin. At this particular juncture, the relationship between income and social capital appears to be tenuous at best as the effect of bonding and bridging social capital is negligible when in relation to making money. The weak and inconclusive outcome seems to make sense as employment status is a prerequisite for income and locating work may in fact utilize social capital (addressed below) in order to do so. In this case, income would likely be more tied into qualifications (i.e. human capital) rather than to social connections.

The hypotheses for employment status met with a mixed outcome. On one hand, three of the four selected social capital indicators have no influence on employment outcomes, regardless of place of residence. On the other hand, family interaction offers some evidence of the presence of bonding social capital in gateway cities. In a study of social capital and diversity in MTV, Pendakur and Mata (2010) note that interaction with others increased when city size and diversity increased. This provides some corroboration of the existence of bonding social capital in the 1st-tier. Ooka and Wellman (2006) also find evidence to varying degrees in Toronto of the importance of ethnic ties, both homogenous and heterogenous, among friendship networks in locating work. Additionally, Xue's (2007) analysis of the LSIC supports the role of a positive relationship between contact with family and friends and the prospect of finding employment. Though the association between social capital and 1st-tier centres is not overly strong, it is present in these three cities. In the grand scheme, however, the effects of the social capital measures are relatively minimal. The overall variance is extremely low, less than half a percent in every model. As a result, this study is aligned with those indicating that social capital, at least the way it is measured, has a negligible effect on both income and employment.

The last of the hypotheses tested is concerned with economic outcome and racialized status. The postulate held that regardless of location in the country, being an immigrant and a member of a racialized minority group would result in negative outcomes for both income and employment. The lack of significant outcome is especially surprising considering previous studies of 1st-tier centres which reveal that members of racialized groups have lower earnings than their counterparts of European or Canadian origins (see

Reitz and Sklar 1997; Pendakur 2005; Piché et al. 2002; Reitz 2007a). Similar findings are reported in Canadian-wide studies as well (see for example Li 1992; Boyd 1992; Baker and Benjamin 1994). Moreover, an analysis of the EDS by Reitz and Banerjee (2007) determine that relative to the census metropolitan area of residence, the mean individual-equivalent household incomes are lower, on average, for visible minorities than those who are from White ethnic groups. While these do imply the existence of a negative association between earnings and racialized status, a more recent study by Li (2008) finds that the relationship may not necessarily be as strong as previously thought. His research indicates that while there is an earning inequality between racialized minorities and their majority counterparts (i.e. British, North and West Europe), the disparity needs to be interpreted with caution; once human capital and duration of work are controlled the variation is almost completely insignificant except for Blacks. Nevertheless, the outcome of the analyses fails to support the hypothesis.

The inclusion of racialized status in this study was not possible due to sample size and various statistical problems but a very strong measure of perceived discrimination is included. An assessment of employment status in this study found that being a member of a racialized group is only important in Montreal, Toronto, and Vancouver (MTV). However, the hypothesis proves faulty as perceived discrimination at work actually notably aids the chances of finding employment, whether full-time or part-time. This appears to contradict the majority of Canadian immigration literature as similar to earnings, a negative outcome is expected. Tran's (2004) report of the racialized minorities in the Canadian labour force confirms this; between 1981 and 2001 a general trend of low employment rates was the norm for this group. However, an important point

is mentioned by Chard and Renaud (1999). The authors note that gateway CMAs have the highest proportion of racialized peoples in the country. Whether this has particular influence on economic success is unknown, yet it remains an interesting factor when considering why the results are the way they are. It needs to be reiterated for outcomes of both regressions, the results are based on perception and not ethnicity or region of origin. Consequently, the results need to be interpreted with caution.

This present chapter has outlined the main results of this research project. The first three sections show the outcomes of the univariate, bivariate, and multivariate analyses for both personal income and employment. The final section of this chapter discussed the major findings of this project as it relates to human capital theory, social capital framework, and the broader literature. Of note is that only immigrants in the 3rd-tier receive stronger monetary returns to education when in comparison to their non-immigrant counterparts. Additionally, a notable variation exists in earnings in the favour of 2nd- and 3rd-tier migrants employed in the health and sciences field. These are a significant finding, especially for the 3rd-tier, given that little research has been devoted to these areas. This might also point to the increased role that Provincial Nomination Programs play in luring skilled newcomers to smaller Canadian CMAs. Social capital proves to be a rather unimportant predictor of economic outcome for immigrants regardless of tier. Whether this is a reflection of the selected measures or the framework itself, it is an important finding considering the lack of data on immigrants in centres outside of the 1st-tier.

Chapter 5: Conclusion

The contributions of this study to our knowledge of migration, place of residence and the labour market outcomes of immigrants in Canada are outlined in this chapter, including the major implications of the findings of this thesis, along with a discussion of limitations and future research projects.

5.1 Review of the findings

This thesis has attempted to identify the factors that influence the economic and employment outcomes of immigrants and whether or not size of residence has any influence on these outcomes, in an attempt to contribute to the known research on the influence of social capital on economic outcomes. This was accomplished through an assessment of personal investments (i.e. human capital) and evaluation of social networks (i.e. social capital). Additional factors such as racialized status, occupation and demographic information are also taken into consideration in this study. Some of the findings appear to support past literature on the subject of economic and employment outcomes of immigrants, while others seem to run counter to it. There seems to be support for the idea that outcomes among immigrants living in 3rd-tier centres outperform those living elsewhere, though these migrants still face challenges in the labour market.

In theory, the ability to relate economic outcome with the establishment of social connections and networks is supportive of the large amount of qualitative research indicating the positive value of social capital in finding work. This type of capital could be especially powerful for immigrants, as 'who you know' may serve as a catalyst for future rewards. However, in practicality the influence of social capital proves minimal at best. The social capital framework is largely inconsequential to employment and income among both immigrants and non-immigrants throughout Canada. An examination of

overall model fits show that the indicators of social capital account for a maximum of two percent of the variation in both income and employment. However, faith in this framework should not necessarily be abandoned as bridging social capital and bonding social capital are significant predictors of economic outcome for some immigrants. Positive effects of bridging social capital are present in each of the first two tiers while this is true for bonding social capital in the 1st-tier. Though the results are weak, there may be some support for the social capital effect. Perhaps the indicators of social capital do not adequately measure the nuances of social networks and trust. In other words, just because the quantitative analysis reveals social capital to be a weak indicator, this does not necessarily mean that an effect is not there. The concept of social capital has not been adequately operationalized at this time.

The importance of human capital theory cannot be overstated. The findings of this project support the established literature on human capital amongst immigrants, though only for income. The effects of human capital theory on finding employment for immigrants are less important. Educational achievement is an important predictor of earnings yet when compared to the Canadian-born, immigrants are almost always at a disadvantage. The returns to education on both employment and income are smaller for immigrants than for Canadian-born. There is a lone exception; 3rd-tier migrants have been found to have better returns to education than the Canadian-born. Level of schooling also increases the odds of being employed for native-born Canadians, but is largely inconsequential for immigrants living outside of the 1st-tier.

5.2 Research Limitations

There are four major limitations to this analysis: 1) the selected measures of social capital; 2) the measurement of racialized minority status; 3) a more distinct gender analysis; and 4) class of immigrants. Though there are additional drawbacks, these four limitations represent the greatest weaknesses of the project, and are discussed below.

To capture the main elements of social capital (namely trust, bridging social capital, and bonding social capital), four measures were chosen. The findings of this study suggest that the selected indicators of social capital are weak predictors of economic returns. This may have been for a number of reasons. First, the selected measures are simply not suitable in capturing such a complex concept. Despite its increased presence in various research studies over the past two decades, there remains no consensus on how to accurately measure the social capital framework. A second possibility is that the chosen indicators are indeed appropriate to capture the main elements of the concept, which would mean that social capital has a negligible effect on economic outcomes for immigrants (as well as non-immigrants). Third, social capital may be important for establishing connections and integrating within the community (along with cultural capital), but may not have an influence on economic outcomes. The effect of integration into daily life in a new country can be quite difficult, especially amongst the increasing number of new arrivals from non-traditional source countries. Utilization of social capital may be a part of the initial newcomer experience, possibly less so when searching for work or seeking monetary gains. In this instance, the effects of social capital would be less quantifiable. Finally, the presence of social capital varies depending on a host of factors not distinguished in this model, such as ethnicity. For example, social capital may be important for a certain ethnic group but not for others.

The general nature of the results obtained would then potentially mask the outcomes for smaller, distinct subgroups.

The Ethnic Diversity Survey provides multiple options for testing of racialized status. It would have been ideal to include origin of birth as an indicator, as this is a commonly used means for determining whether an individual would be classified as racialized in the workplace. Unfortunately, due to collinearity with origin of degree--deemed to have greater priority--this measure was removed. Various permutations of the variable for ethnic origin were employed in an attempt to resolve this issue. While theoretically helpful, ethnic origin does not necessarily identify whether an individual is a member of a racialized group. For example, those from European backgrounds may be considered Caucasian on paper, but may not actually be perceived as such. Hence, ethnicity can be a rather subjective measure. Further, this option was not statistically viable due to small sample sizes and extreme multicollinearity. The final option, which I ultimately employed, is perceptions of discrimination in the workplace or when applying for a job or a promotion as a proxy for racialized status. This measure is inherently imprecise for one specific reason; perception does not equate to truth. Individuals perceiving discrimination or racism in the workplace may in fact be misreading a situation that may have to do with work ethic, qualifications, or an entire litany of other possibilities. For example, the attribution of an unsuccessful job interview to discrimination when in fact there was a more qualified candidate who secured the position. The individual may never know for sure. Moreover, discrimination, whether real or not, may not have to do with skin colour but as a result of another factor, such as

the possession of an accent. The use of any sort of perceptions can be imprecise and in this case, the significant outcomes should be interpreted with caution.

The last two weaknesses identified in this section are sources for improvement on future surveys, rather than limitations per se. Gender and class of immigrants could each benefit from an increased level of elaboration and distinction. Despite being included in all models, it was not possible to run models for males separate from females in this study, as the number of equations would be staggering (128 equations needed to answer the research question compared to the 64 contained within this thesis). Therefore, it is unclear as to whether the economic outcomes of males and females and among immigrants and non-immigrants, is the same in each of the four tiers. It would be beneficial to know if the outcomes in one tier are the same in the others. Similarly, no distinction is made between the different entrance classes of immigrants in the data set since the EDS does not contain information on whether the immigrant arrived to Canada as a refugee, sponsored family member, business person or skilled worker. While neither problem is fatal to this research project, each is a source for improvement in future studies.

5.3 Policy implications

The vast majority of immigration literature in Canada has been concerned with those residing in Montreal, Toronto, or Vancouver; and with good reason. These Canadian cities are global centres that serve as central receptacles for immigrants to this country. Combined, MTV possess the greatest proportion of immigrants in Canada and accordingly, garner the majority of attention in both academia and the media. But these are not the only locations where immigrants reside in the country. One of the main

objectives of this study has been to explore the economic outcome of immigrants in the major immigrant-receiving Canadian CMAs, with the intent to further increase the knowledge of the economic situation amongst immigrants in the smaller 2nd- and 3rd-tier cities. Of the studies comparing gateway CMAs versus non-gateway centres (for example, Frideres 2006; Bernard 2008; Haan 2008), the findings indicate that immigrants outside of the MTV triad are generally the recipients of better economic outcomes. To a certain extent, this study confirms these previous results. In several instances, immigrants in smaller tiers not only outperform their 1st-tier counterparts, but also their Canadian-born cohort. As a result, this research is of particular interest to provincial and municipal planners working in the migration field, as it contains statistical proof that economic and employment opportunities are plentiful in 3rd-tier centres. This may help 3rd-tier municipalities, along with their settlement agencies, to leverage funds from the provincial government to assist newcomers in successful resettlement in their new communities.

While it may be difficult to dissuade prospective newcomers from moving to MTV, considering the allure of big cities, their large ethnic communities, ethnic-specific settlement agencies and the amenities that they contain, the argument that employment and income opportunities are more plentiful may prove a compelling argument for some young professional newcomers. As a result, this study provides strong evidence in support of the PNP for these smaller centres. Advertising and educational campaigns by provinces and municipalities may increase the number of would-be migrants to the smaller CMAs. The responsibility would then fall on researchers, government, and the

media to aid in the shift of national attention from the 1st-tier to elsewhere in the country. Academia must make it a priority to investigate this group as well.

According to Reitz (2010), the Canadian immigration policy also needs to address both the short-term specific skill shortages in the labour market and the long-term goal of nation building and expansion of the economy and the population. This goal does not just apply to 1st-tier centres, but to the whole of Canada. The MTV triad serves as the central hubs for immigration into Canada, but this does not exclude the fact that success can also be found elsewhere in the country. Immigration will continue to act as the lifeblood of this country; it remains imperative that this process is a Canadian-wide phenomenon, not limited to the country's three largest cities. For this reason, it is important for 2nd- and 3rd-tier cities, as well as 4th-tier locales, to consider this when making long term economic plans. Perhaps investment in ethno-cultural services specific to particular immigrant groups may also improve the ability of non 1st-tier centres to attract immigrants to the labour market.

5.4 Recommendations for future research

Although this study uncovered some notable findings, more directed research on immigrants in the 2nd- , 3rd-, and 4th- tiers is required. Few studies have concerned themselves with immigrants in these places (for example, Frideres 2006; Haan 2008; Wilkinson and Kalischuk 2009; Ma 2010) despite the fact that a quarter of this population live outside of gateway CMAs. For a country such as Canada, which not only relies greatly on immigration but prides itself on it, the gap in literature needs to be filled.

From an economic standpoint, the outcomes obtained in this project should be confirmed with the use of a more recent dataset, as the EDS is nearly a decade old and

the economic landscape of the country has somewhat changed (i.e. the late 1990s "IT bust" and the more recent labour market recession) (Picot and Hou 2009; Reitz 2010). Whether the results obtained in this thesis are indicative of an economic trend or of a more isolated situation still needs to be established. Furthermore, certain economic findings arose from this study that require follow-up. Areas to follow-up include why 3rd- and 4th-tier immigrants generally have greater economic returns than their 1st-tier counterparts and also why immigrants in the 2nd-tier receive the lowest returns to education of all of the foreign-born groups. In other words, the human capital of immigrants outside of the 1st-tier needs further investigation.

Another area of interest for future research relates to occupation. Throughout the tiers, the combined fields of health, natural, and the applied sciences consistently produced the highest outcomes of their respective models. For prospective analyses, these three fields should be separated into individual constituents to determine whether the economic products of each sector are similar throughout or vary based upon tier. A more central focus could be the outcomes of healthcare workers. With the state of the healthcare system (i.e. with the increasing healthcare demands of the aging general population), both in the present and in the future, it is of vital importance to determine the economics of the situation. This would assist in existing efforts to develop strategies for dealing with the inevitable shortages in the system, especially in smaller CMAs. If indeed the economic outcome is better in certain tiers, this would certainly present a positive marketing point to draw in foreign-born healthcare professionals.

Lastly, due to the relative void of immigration literature in the 2nd- and 3rd-tier, a number of additional research topics in wide array of areas beyond economic outcome

can be explored. These include, but are not limited to: immigrant retention rates amongst smaller CMAs; 2nd-generation immigrants outside of Montreal, Toronto, and Vancouver; and the role of ethnic attachment in establishing social connections and networks in these locales. Each of these topics would provide peripheral results to this project's findings and elaborate on the immigrant situation in smaller immigrant-receiving centres.

5.5 Concluding observations

Immigration has and will continue to serve a vital role in Canada's labour market. In the past, the focus of the Canadian immigration policy has been geared towards those with high levels of education, resulting in an increasingly educated group of newcomers. Yet, many Canadian immigrants either cannot find work or are employed in labour positions well below their schooling levels. This is a mutually unsatisfactory arrangement for both immigrants and the Canadian labour market. In an effort to address this issue as well as strengthen the Canadian economy, government has realigned immigration policies away from educational achievement. As Reitz (2010:1) states, "there has been a shift in selection criteria away from formal education toward greater emphasis on official language knowledge and experience in particular occupational categories in current demand." Such progressive strategy demonstrates the continued importance of immigration. Canada has gained a positive reputation worldwide regarding its immigration program; few countries have experienced such a positive track record with newcomers. While not perfect, Canada remains exemplary in its willingness to adapt to changing circumstances while addressing labour market needs. Immigration has been a part of Canadian culture for over three centuries, and with the continued focus of the

Canadian government on improving immigration policy, it is certain to remain so for many more.

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Appendices

Appendix A. Frequencies for weighted cross-tabulations and chi-square test of significance for immigrants and non-immigrants, gender, location and employment status aged 25-64, who are not self-employed.

Nativity status	Gender	Employment status	Location			
			Tier one	Tier two	Tier three	Tier four
Canadian-born	**Male**	Full-time employment	1,095,210	592,210	673,510	1,691,480
		Part-time employment	89,970	41,470	37,170	102,800
		Not applicable < 15 hours worked	142,710	57,840	88,650	308,950
		N	1,327,890	691,520	799,330	2,103,230
	Female	Full-time employment	977,690	523,210	508,800	1,270,720
		Part-time employment	252,390	141,570	189,050	517,470
		Not applicable < 15 hours worked	305,210	150,670	183,660	655,240
		N	1,535,290	815,450	881,510	2,443,430
		Total N	2,863,180	1,506,970	1,680,840	4,546,660
Foreign-born	**Male**	Full-time employment	705,890	172,840	106,840	105,190
		Part-time employment	54,600	9,820	8,510	7,370
		Not applicable < 15 hours worked	130,830	26,850	14,760	20,220
		N	891,320	209,510	130,110	132,780
	Female	Full-time employment	653,390	134,710	80,900	60,920
		Part-time employment	142,330	46,420	22,950	34,140
		Not applicable < 15 hours worked	311,400	73,600	60,740	56,980
		N	1,107,120	254,730	164,590	152,040
		Total N	1,998,440	464,240	294,700	284,820

*Please note all values are significant ($p < 0.001$)

Appendix B. Frequencies for weighted cross-tabulations and chi-square test of significance for gender, location, nativity status, and income aged 25-64, who are not self-employed.

Nativity status	Gender	Income	Location			
			Tier One	Tier Two	Tier Three	Tier Four
Canadian-born	**Male**	**$0 - $12,999**	104,010	45,390	64,290	181,840
		$13,000 - $25,999	138,620	62,580	81,330	344,650
		$26,000 - $38,999	194,600	109,330	133,870	448,930
		$39,000 - $51,999	268,010	145,270	186,960	409,630
		$52,000 or greater	431,540	237,460	223,740	482,650
		N	1,136,780	600,030	690,190	1,867,700
	Female	**$0 - $12,999**	308,550	200,660	224,780	813,930
		$13,000 - $25,999	233,600	119,570	168,660	564,220
		$26,000 - $38,999	296,760	157,140	162,180	381,220
		$39,000 - $51,999	226,140	128,320	113,680	206,630
		$52,000 or greater	185,920	112,140	66,950	137,160
		N	1,250,970	717,830	736,250	2,103,160
		Total N	2,387,750	1,317,860	1,426,440	3,970,860
Foreign-born	**Male**	**$0 - $12,999**	92,780	17,340	8,560	9,850
		$13,000 - $25,999	127,180	40,470	21,630	18,030
		$26,000 - $38,999	160,830	29,550	15,850	26,470
		$39,000 - $51,999	148,540	34,640	26,390	21,720
		$52,000 or greater	199,940	59,610	36,940	41,500
		N	729,270	181,610	109,370	117,570
	Female	**$0 - $12,999**	313,040	82,330	52,720	61,960
		$13,000 - $25,999	186,550	53,530	33,390	28,360
		$26,000 - $38,999	171,090	27,410	25,640	15,290
		$39,000 - $51,999	114,230	25,880	8,260	10,670
		$52,000 or greater	73,130	21,870	13,740	8,430
		N	858,040	211,020	133,750	124,710
		Total N	1,587,310	392,630	243,120	242,280

*Please note all values are significant ($p < 0.001$)

Appendix C. Frequencies for weighted cross-tabulations and chi-square test of significance for gender, location, and education level aged 25-64, who are not self-employed.

Gender	Education level	Location			
		Tier One	Tier Two	Tier Three	Tier Four
Male	**High school education w/o certificate (includes no schooling)**	396,930	134,230	156,310	601,230
	High school w/ secondary graduation certificate, trades certificate or diploma	360,510	136,950	182,290	509,430
	Non-university w/o other non-university or trades certificate or diploma	166,880	61,020	64,680	140,400
	Non-university only w/ trades certificate, diploma, or other non-university certificate	460,430	227,200	257,600	585,590
	University w/ or w/o certificate, diploma, university certificate below bachelor level	282,430	115,060	95,340	166,570
	University w/ bachelor or first professional degree	394,080	159,480	122,410	177,470
	University w/ university certificate, master's or doctorate degree	205,360	81,980	64,030	87,470
	N	2,266,620	915,920	942,660	2,268,160
Female	**High school education w/o certificate (includes no schooling)**	485,820	156,700	214,990	672,780
	High school w/ secondary graduation certificate, trades certificate or diploma	460,540	180,730	207,480	511,110
	Non-university w/o other non-university or trades certificate or diploma	184,680	82,940	69,220	166,460
	Non-university only w/ trades certificate, diploma, or other non-university certificate	541,640	260,300	262,650	697,140
	University w/ or w/o certificate, diploma, university certificate below bachelor level	352,080	122,600	121,720	257,820
	University w/ bachelor or first professional degree	470,390	210,700	122,450	251,510
	University w/ university certificate, master's or doctorate degree	199,450	81,750	60,870	83,330
	N	2,694,600	863,440	1,059,380	2,640,150
	Total N	4,961,220	1,779,360	2,002,040	4,908,310

*Please note all values are significant ($p < 0.001$)