

LANGUAGE AND EARNINGS: HOW PROFICIENCY IN OFFICIAL LANGUAGES  
AFFECTS IMMIGRANTS' EARNINGS IN CANADA

by

Yang Wang

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at

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DALHOUSIE UNIVERSITY  
DEPARTMENT OF ECONOMICS

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Dated: December 12, 2012

Supervisor: \_\_\_\_\_

Readers: \_\_\_\_\_

\_\_\_\_\_

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## DEDICATION PAGE

This thesis is dedicated to my parents for their endless love, guide and support throughout my life.

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## **ABSTRACT**

This paper studies how proficiency in host countries' official languages affects immigrants' earnings in destination countries. An earnings gap is found between Canadian-born and immigrant workers in Canadian labor market. Taking advantage of rich information about language use from the Ethnic Diversity Survey, language spoken at work, home, EDS interview, with friends, spouses and children are included in an attempt to reduce the earnings gap. Among all languages examined, individuals who speak English have the highest earnings in each context. Results also show that language spoken at home has the greatest effects on immigrants' earnings in Canada as the gap is eliminated when home languages are controlled in the model. Immigrants who speak English at home benefit from extra practice with families, which helps them become more fluent faster. Potential policy implication implies both timely and monetary investment in language training is useful for helping immigrants settle down in Canada.

## **LIST OF ABBREVIATIONS USED**

EDS Ethnic Diversity Survey

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I would like to, first of all, thank my parents for supporting me throughout my Master's study in Canada both financially and emotionally. Without them, I wouldn't be able to realize the goals I have set in my life so far.

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## **CHAPTER 1 INTRODUCTION**

Language abilities are crucial for people who want to immigrate to other countries. Being able to communicate in host countries' official languages help immigrants more easily adapt to new cultures, make new friends, find employment opportunities and live a better life in their destination countries. Previous studies have examined the effects of language on immigrants' economic well-being, which often is measured as immigrants' earnings. For example, Chiswick and Miller (2003) find that language skills are a crucial factor that determines immigrants' earnings in Canada. A positive relationship between earnings and language abilities has also been found in many studies. Both Chiswick and Miller (2001) and Li and Dong (2008) discover in their studies that higher language abilities are related to higher earnings for both men and women in Canada.

However, measuring immigrants' language abilities or potential fluency in host countries' official languages still remains a challenge. Self-reported language abilities from immigrants can be questionable since the perception of their own potential language proficiency can vary by individuals. Scores from language tests can also be biased, as the tests themselves may not demonstrate language abilities of immigrants when it comes to daily communication. Therefore, finding a better solution to measure immigrants' potential language competency is an important element in studying the relationship between economic well-being and language abilities for immigrants.

This paper takes advantage of rich information about language use in different contexts provided by the Ethnic Diversity Survey to measure the effects of immigrants' potential language competency on their earnings in 2002 in Canada. This study also

attempts to explain how being relatively more fluent in the Canadian official languages helps immigrants reduce their earning gap from their Canadian-born counterparts. Contexts included in this study are language used at work, at home, with friends, with spouse, with children and at the Ethnic Diversity Survey interview. Separate analyses are provided for men and women.

The structure of this paper is as follows. Chapter Two reviews previous studies that have been done about examining the language effects on immigrants' economic well-being. Chapter Three will discuss data used in this study. Chapter Four focuses on models used in this study and results. Conclusions will be provided in Chapter Five.

## CHAPTER 2 BACKGROUND AND LITERATURE REVIEW

Canada is a multicultural country with immigrants<sup>1</sup> making up 20 percent of the population (Census 2006). Census data also show that from 2001 to 2006 the population of Canada grew by 5.4% and immigrants contributed to the growth 2.4%. Thus, immigrants were responsible for almost half of population growth over the past 5 years (Census 2006 and 2001). Moreover, while the labor force in Canada has grown by almost 8%, immigrants contributed 3%.

Immigrants, especially newly arrived ones, always have to go through a difficult period to adjust themselves to the host country and new culture so that they can get ready to live and work independently. One of the biggest barriers immigrants have to overcome is learning to speak the host country's official language(s), which in Canada are English and French. According to data from the latest census, the largest group of recent immigrants to Canada comes from Asia, consisting of up to 58.3% of all newcomers in 2006. Not surprisingly, 70.2% of all immigrants speak a first language other than English or French (Census 2006). Language skills are an important form of human capital, especially for immigrants. Being able to communicate in English or French helps immigrants find employment, establish connections with friends and settle down in their new communities.

Acquisition of the ability to communicate in a host country's official languages at an acceptable level is dependent on several different factors. Chiswick and Miller (1990) explore some important factors that help immigrants adopt host countries' official languages more easily. Those factors include early immigration, greater exposure to the

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<sup>1</sup> Immigrants are defined as residents who were born outside of Canada but have been granted the rights to live in Canada permanently by immigration authorities. This includes permanent residents, residents having no permanent right to live in Canada and naturalized citizens.

host country's official languages, longer duration in the destination country, higher level of education, being single and more frequent use of host country's official languages at the place of residence. Chiswick and Miller (2001) point out that economic incentives and wealth are also important determinants of how likely an immigrant is to become fluent in a host country's official languages. Immigrants who are more eager to achieve higher wage levels and stay in the host country's labor market as well as those who are wealthier are more likely to invest in the acquisition of languages as a form of human capital.

Understanding the importance of language skills helps immigrants achieve their economic, political and social well-being and integrate better in the new culture in host countries. The importance of communication in a host country's official languages for immigrants has been examined in many previous studies. Especially in Canada, as explained by Man (2004), knowledge and fluency in English or French are necessities and emphasized for immigrants to be qualified as skilled workers. In his study of language abilities of immigrants in the US, Carliner (2000) argues that immigrants with poor English skills are more likely to live in poverty, to have children who do poorly in school and to be less likely to become a citizen or participate in political activities. Lo and Wang (2005) find that immigrant workers from Hong Kong are preferred by Canadian employers to those from mainland China due to higher proficiency in English and the fact that 49% of immigrants from Hong Kong can speak English by the time they arrive in Canada.

Among all of the benefits from competence in a host country's official languages, the effects of fluency on immigrants' labor market outcomes, especially measured in



terms of annual earnings, attract a significant amount of attention from researchers.

An earnings gap between immigrant workers and Canadian-born workers in Canada has been found in many studies. For example, Bloom et al. (1995) observed in the 1990s that immigrant workers earned as much as 23% less than their Canadian-born counterparts although the growth rate of earnings for immigrant workers was higher. However, it still took 11 years for European and U.S. immigrants and 43 years for Asian, African and Latin American immigrants to catch up with their Canadian-born counterparts

Factors that cause the gap in earnings between immigrants and native-born employees include age, education, working experience and host country's official language proficiency. Sweetman and Schaafsma (2001) find that early immigration, as well as having the host country's education and working experience, help immigrant workers achieve higher earnings in Canada. In addition to the common determinants mentioned above, Chiswick, Lee and Miller (2005), using the Longitudinal Survey of Immigrants to Australia in their study of immigrants in Australia, argue that international transferability of human capital, the degree of favorable selectivity and type of immigrant visa are also crucial to economic well-being for immigrant workers in their destination country.

The importance of fluency in the host country's official languages is also examined for immigrants in Canada and other countries in many studies. Aydemir and Skuterud (2005) state that for the cohort from 1966 to 2000 entry earnings for immigrant workers have been declining in Canada. They take advantage of census data from 1981 to 2001 and find that a third of the deterioration of immigrant workers' entry earnings in



Canada can be explained by the shift of major source countries from Europe and the U.S. to Asia and the consequent shift of knowledge of English or French and mother tongue of new immigrants. Green and Worswick (2009) also find that 16% of the gap in entry earnings for immigrant men in Canada from 1980s to early 2000s comes from the shift in immigrant source countries. In an early study conducted by Chiswick and Miller (2001), based on the 1991 Census of Canada, they found that immigrant workers from non-English speaking countries who were relatively more fluent in English earned 14% more than those who spoke poor English in Canada in the 1990s. This situation also applies to Chinese immigrants. Li and Dong (2008) find that both Chinese men and women immigrant workers who work in Chinese enclaves and do not speak English at work have lower earnings from their jobs. Ferrer, Green and Riddell (2005) use literacy test scores to explain the earnings gap between immigrant workers and native-born workers and they find that an increase in the score from the literacy test can reduce the gap as much as the one caused by raising the education level from high school diplomas to bachelor degrees.

Different measures of language proficiency have been used in the field of studying linguistic effects on immigrant workers' earnings. In their report and analyses of recent immigrants in Toronto, Chua et al. (2001) explore the effects of speaking English and a non-official language on immigrant workers' earnings. They discover that given gender, immigrant category and occupation skills and class of worker, those who report that they speak English or French at work on average earn as much as \$10,000 more than the ones who use non-official languages at work. Similar measurements have been adopted by Boyd (2009) to define proficiency in Canadian official languages. She takes advantage of Census 2006 data to construct a proficiency variable in her model based on

languages “most often used at work” and languages “regularly used at work” and also finds that allophone immigrants who use non-official languages at work have lower wages.

However, despite all the models that have been built to study the effects of language on immigrant workers’ earnings, there is still a bias remaining when judging an individual’s proficiency. Most previous studies are based on self-reported language proficiency from surveys and interviews, such as the Census data from Canada, Australia or other countries, the accuracy of which is doubtful. Although different ways have been adopted to measure proficiency, such as collecting information from languages used at work (see Boyd 2009), this is still limited since people who speak English at work are not necessarily fluent in English; they may have no choice but to use English in order to secure a job.

In this study, in addition to languages used at work, languages spoken in other contexts of immigrants’ daily life are included to provide more information when studying immigrant workers’ likely language abilities and their effects on immigrant workers’ earnings relative to the earnings of Canadian-born workers. Those contexts include work place, home, with friends, with spouse, with children and at the Ethnic Diversity Survey interview. In Canada, most work places require employees to speak English, so simply basing an analysis on language used at work may not provide much information about English competency. However, if an immigrant worker speaks English not only at work, but also at home, with family and friends, he or she has more exposure to English and more opportunities to practice. In this case, he or she is likely to be

relatively more fluent than others, since the acquisition of a language largely depends on time devoted to practicing.

## **CHAPTER 3 DATA ANALYSIS**

### **3.1 ETHNIC DIVERSITY SURVEY**

The data used in this paper are from the public use Ethnic Diversity Survey (EDS) conducted by Statistics Canada in 2002. The Survey has a target population of 23,092,643 persons who are 15 years of age and over living in the 10 provinces in Canada, of which 57,242 persons were selected for the survey. In the end, 42,476 responses were collected. Normal EDS interviews took between 35 and 45 minutes and were conducted mainly in English and French. Other languages were also used in order to finish interviews for people from different countries and with different levels of language proficiencies. The EDS also provides sample weights that relate the sample to the target population. Each observation in the data set has a weight that is calculated as the inverse of probability of including that specific person adjusting the “no response” and “not applicable” responses. Thus, the more likely a person is to be included in the survey, the smaller the weight for this person will be.

The Ethnic Diversity Survey focuses on how people’s ethnic background affects their social and economic participation in Canada. One of the advantages of this survey is that it contains rich information about languages. It surveys people about their first language, language spoken at home, language spoken with friends, language used at work and language that spouses speak. The EDS asks questions regarding languages spoken in various contexts, such as “What language do you most often speak at home”, “What language do you most often speak with friends”, “What languages does your spouse/partner speak well enough to conduct a conversation” and “What languages does

your child speak well enough to conduct a conversation”. Answers are categorized into “English only”, “French only”, “Non-official language only”, “Non-official languages only”, “English and French”, “English and non-official languages”, “French and non-official languages” and “English and French and non-official languages”. Non-official languages have also been specified and listed in this survey. What’s more, other than official or non-official languages, this survey also lists the specific non-official languages one speaks in different contexts such as Mandarin, Spanish, Italian, German, etc. Thus, the EDS provides potential comparisons of earnings for people who speak different languages other than English and French as well as the context in which their languages are used.

The EDS contains important information about other determinants of earnings that will be used in this paper. Those variables include age, gender, marital status, total number of children, social activities, highest level of education, ethnic origin, racial background and family backgrounds.

Answers to survey questions in the EDS are in categories; therefore most of the variables used in this study are binary variables. After eliminating observations with responses like “I don’t know”, “no responses” or “not applicable”, and respondents who are either under or above the age range to be in the labor force (i.e. under 25 years old or over 55 years old), there are 14,352 respondents left in the sample with 53.18% being males and the rest being females.

### **3.2 LANGUAGE PROFICIENCIES AND CONTEXTS**

In addition to “language most often used at work” used in Boyd (2009), “language spoken at home”, “language spoken with friends, spouse and children” and “language spoken at the interview” are also included in this study. Defining language fluency from a self-reported survey still remains a difficult task, but considering languages used in different contexts may provide additional information. For example, an immigrant worker whose first language is not English, and who is married to someone using English as mother tongue, will use English at home more often than his or her counterpart who gets married with someone from the same source country. Therefore he or she will spend more time speaking English, which helps improve the immigrant’s fluency level. Comparisons can also be drawn between people who speak English or French at home, at work and even with friends, children and spouses.

Based on the respondents’ answers to language questions, language variables are coded as “English only”, “French only”, “Non-official languages”, “English and French only” and “Combinations” for different contexts. “Non-official languages” include respondents who use either one non-official language or multiple non-official languages at work or at home. “Combinations” is defined as either English or French combined with a non-official language or both English and French with a non-official language (see Table 1). All of the language variables are coded as binary variables with 1 indicating the specific language or languages apply to a person and 0 otherwise.

Table 2 illustrates the number of respondents from the sample that speak certain languages in different contexts. Combining information about languages used at work, home and with friends shows what one uses on a day-to-day basis. The more a person is



exposed to a certain language, the faster he or she can gain fluency. Immigrants to Canada who use English or French more often in their daily life are likely to improve proficiencies in the official languages faster. Respondents who use English in all the contexts are separated in the last column and are assumed to have higher fluency and thus to have higher earnings. This hypothesis will be tested in the next section using OLS regressions. Due to the small French-speaking population in this sample, the effects of speaking French in all contexts will not be examined in this study.

As explored by Chiswick and Miller (1996), language exposure at home is an important factor that contributes to proficiency in host country official languages. Time spent with families including parents, spouses and children is almost all a person has other than time spent at work. Chiswick and Miller (1995) also indicate that languages used with families, to a certain degree, determine how fluent one can be in the official languages. If an immigrant worker is married to someone who only uses English to communicate, he or she has to speak English as well, and will therefore be relatively more fluent than immigrants who are married to people from the same non-English-speaking source country who speak their home language. The same theory applies to immigrants and their children. If children are the first generation born in Canada, they tend to pick up English or French naturally. It might not be a problem for parents who are from the same country and speak the same home country language rather than English, since those parents tend to speak their home languages to their children so that their children can be bilingual. However, for parents that come from two countries that do not share the same home language but only English as a common language, they are more likely to speak English to each other and their children as well. For the second

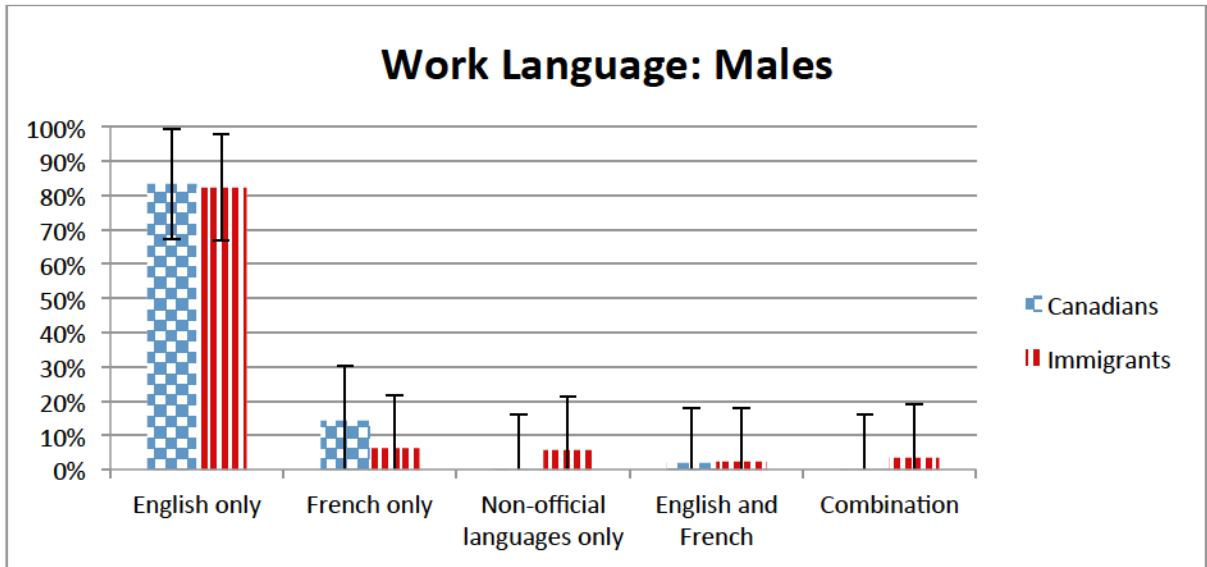
combination, in order to communicate with their children, those immigrant workers have to speak at least basic English to converse. All of the facts above are hypothesized to contribute to immigrant workers' higher proficiency in English or French and will be tested in this study. Table 3 describes the number of respondents' spouses and children by languages they speak.

As mentioned above, information about language usage in different contexts is used in this study to measure potential proficiencies in order to test whether language proficiency helps to explain earning gaps between immigrants and Canadian-born workers. Separate analyses are conducted for males and females.

For both males and females, as illustrated in Figure 1 and 2, English is the dominant language spoken at work for both immigrants and native-born Canadians, as we can see that over 80% of the sample population speak English at work. It is not surprising that if immigrants choose to work in Canada, speaking English at work is one of the basic requirements since the majority of Canadian-born workplaces are English-speaking. Less than 13% of immigrants or Canadians speak French at work for both males and females due to the characteristics of their work places, such as linguistic enclaves, immigrants' communities and cities like Montreal or Ottawa. Almost no Canadians use non-official languages at work places.

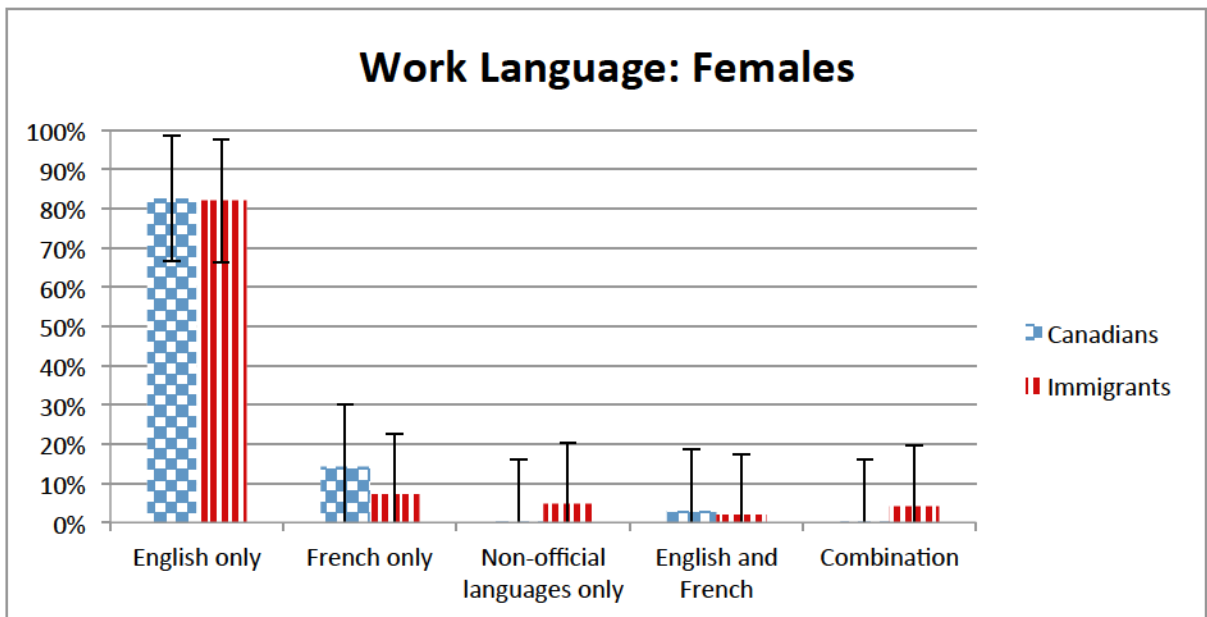


Figure 1. Language Spoken at Work for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

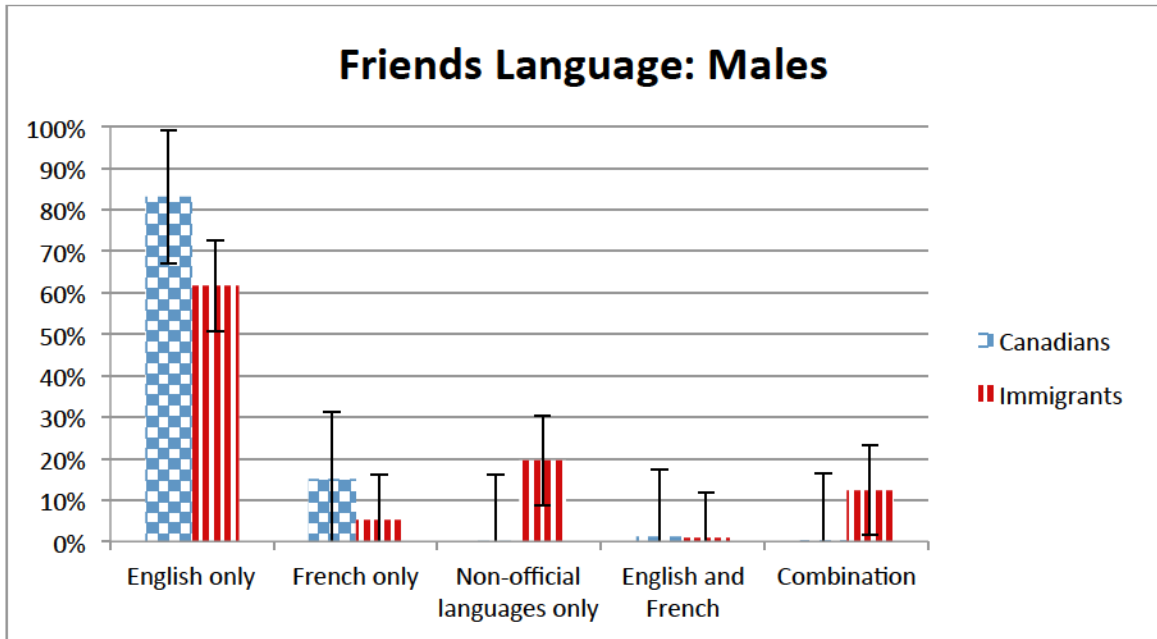
Figure 2. Language Spoken at Work for Canadians and Immigrants, Females



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

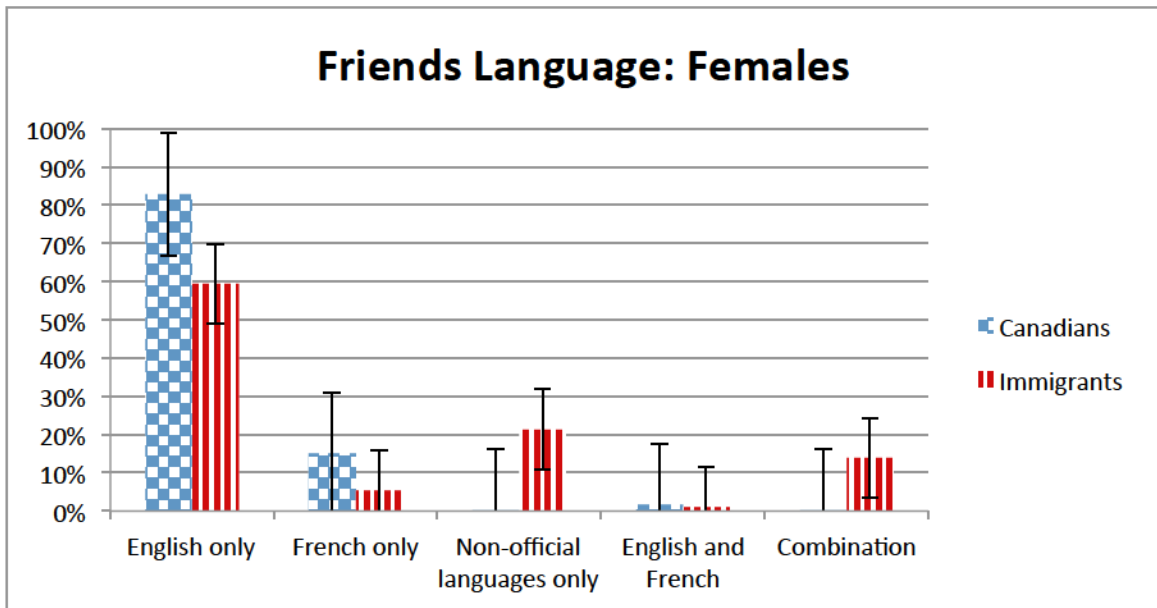
Languages spoken with friends show more differences between Canadian-born and immigrant workers as we can see in Figure 3 and 4. Although the majority of immigrant workers speak English most often with their friends, around 20% of them speak non-official languages most often with friends. Speaking only non-official languages with friends may limit acquisition of English or French for immigrants. It is also true that causation may go the other way here if non-fluent immigrant workers may not be able to make as many Canadian friends due to the barrier in communication. This in turn will not help immigrant workers improve their English or French. Unsurprisingly, more than 80% of Canadian-born workers speak English to their friends and only around 10% use French; almost no one just uses non-official languages.

Figure 3. Language Spoken with Friends for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

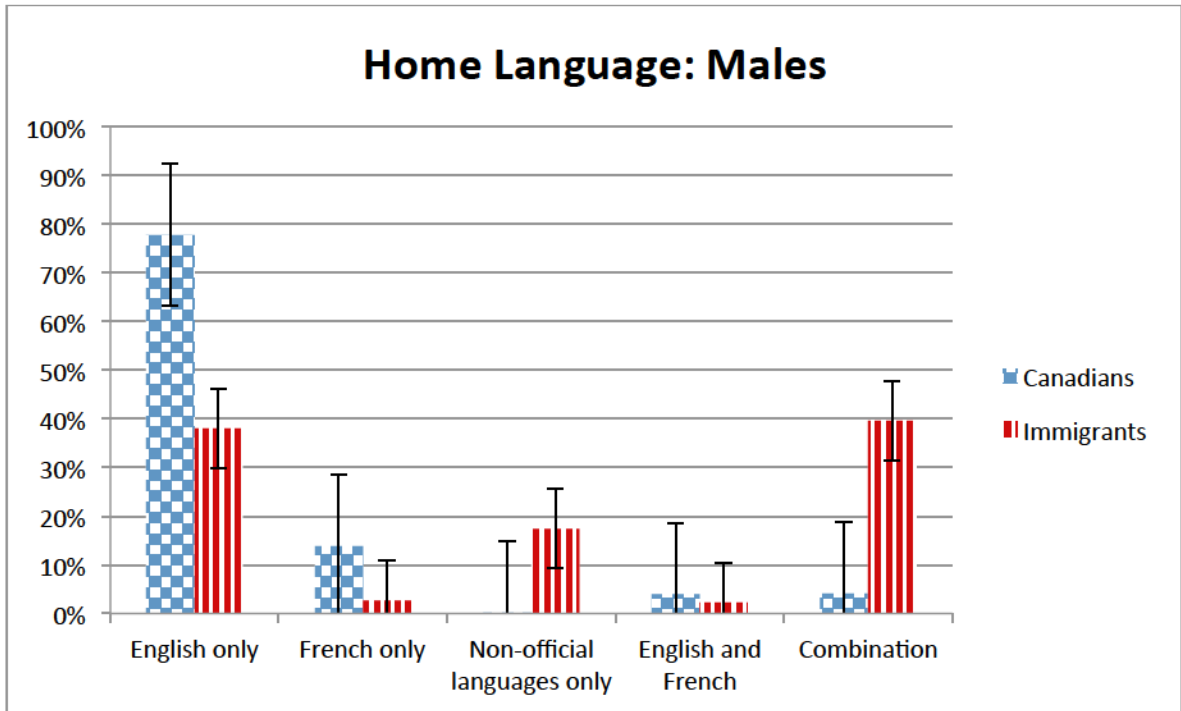
Figure 4. Language Spoken with Friends for Canadians and Immigrants, Females



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

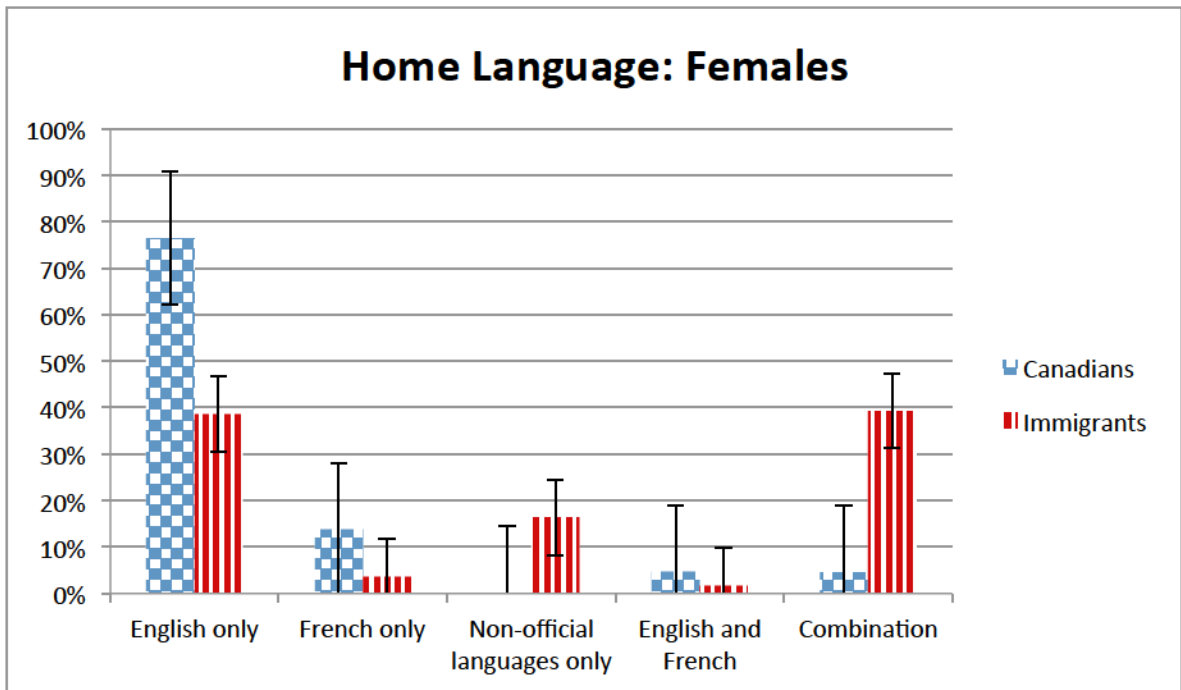
Figures 5 and 6 show that languages spoken at home differ significantly between immigrant and Canadian-born workers. Only 41% of immigrants speak English regularly at home, presumably largely from the US, UK and other English-speaking countries. Close to 20% of immigrants only use non-official languages, presumably their first languages, and another 40% of immigrant workers speak non-official languages in combination with English or French with families. For example, immigrant parents usually speak both English or French and their source country languages to their Canadian-born children so that their children can be bilingual. Speaking source country languages makes it more comfortable for immigrant parents, but it also means less time spent on practicing English, which may result in differences in potential proficiencies in the Canadian official languages.

Figure 5. Language Spoken at Home for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

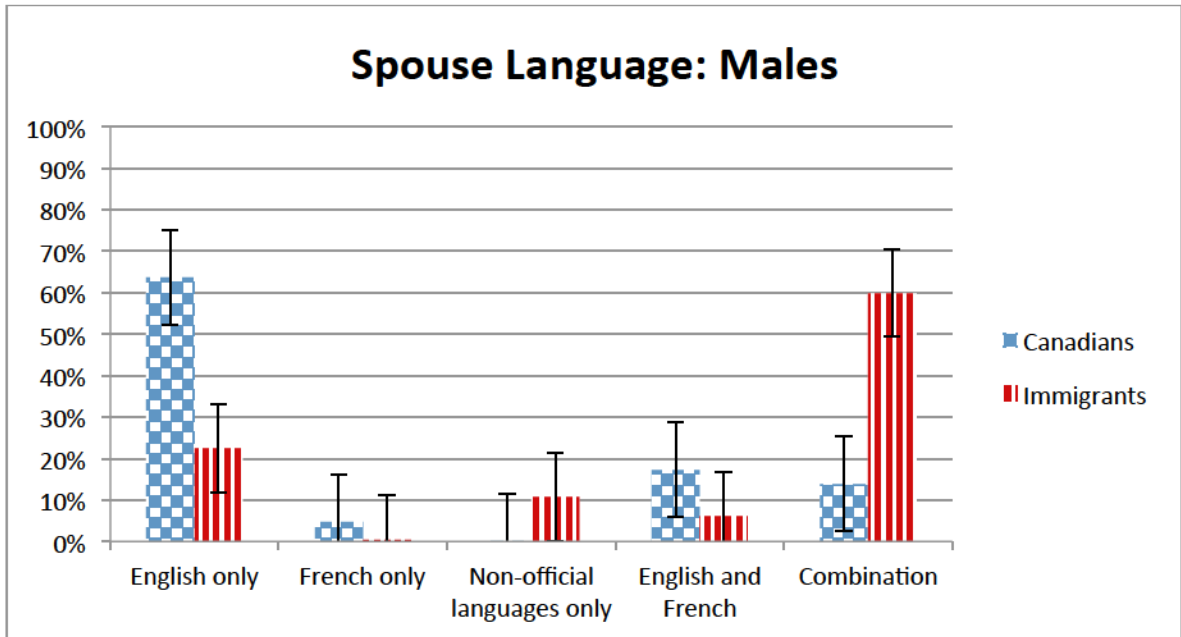
Figure 6. Language Spoken at Home for Canadians and Immigrants, Females



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

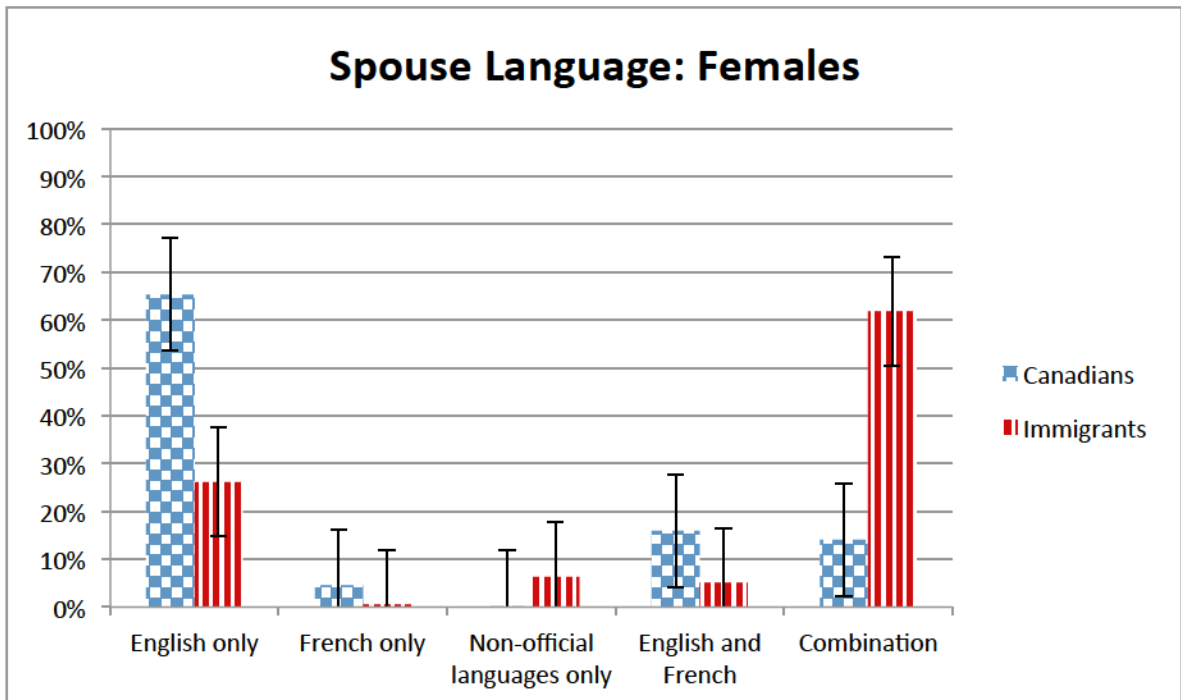
In a subsample of people who are married and have children, information about languages spoken with spouses and children provides additional contexts to help us better understand potential proficiencies in the official languages. As we can see from Figures 7 and 8, more than 60% of Canadian-workers have spouses that are English-speaking and around 15% of them have wives or husbands who are bilingual in English and French, English and a non-official language or French and a non-official language, which suggests the possibility of marriage between immigrants and Canadians. However, immigrant workers in this sample appear to be more likely to be married to other immigrants from the same source country or to have immigrated together as we can see almost 60% of immigrant workers' spouses speak English and a non-official language, which presumably is their source country language. It seems that female immigrants are more likely to marry someone from an English-speaking country including Canada as more than 25% of them have spouses speaking English most often.

Figure 7. Language Spoken by Spouse for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 8. Language Spoken by Spouse for Canadians and Immigrants, Females

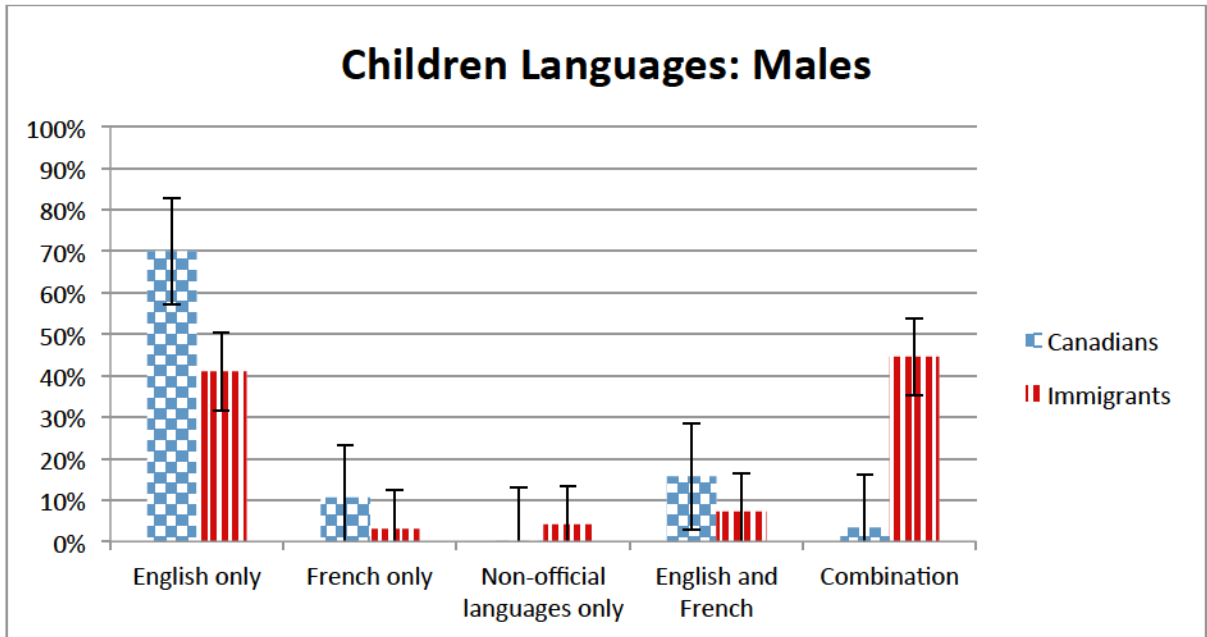


Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Among all the respondents who have at least one child, patterns of languages spoken by children are different for immigrant than Canadian-born workers. Figures 9 and 10 show that about 67 percent of Canadian-born workers' children speak English and 15% of male Canadian-born workers' and 18% of female Canadian-born workers' children use both English and French. Compared to Canadians, immigrants sometimes have to speak English to their kids due to the fact that their children usually learn and speak English at school or with friends most of the time. For both male and female immigrants, more than 40% of their children either speak English or English combined with their source country language as only less than 5% of immigrants' children speak only non-official languages. Again, as hypothesized, more time spent using English at home with children or spouses will improve immigrants' proficiencies in English, which might be associated with higher earnings.

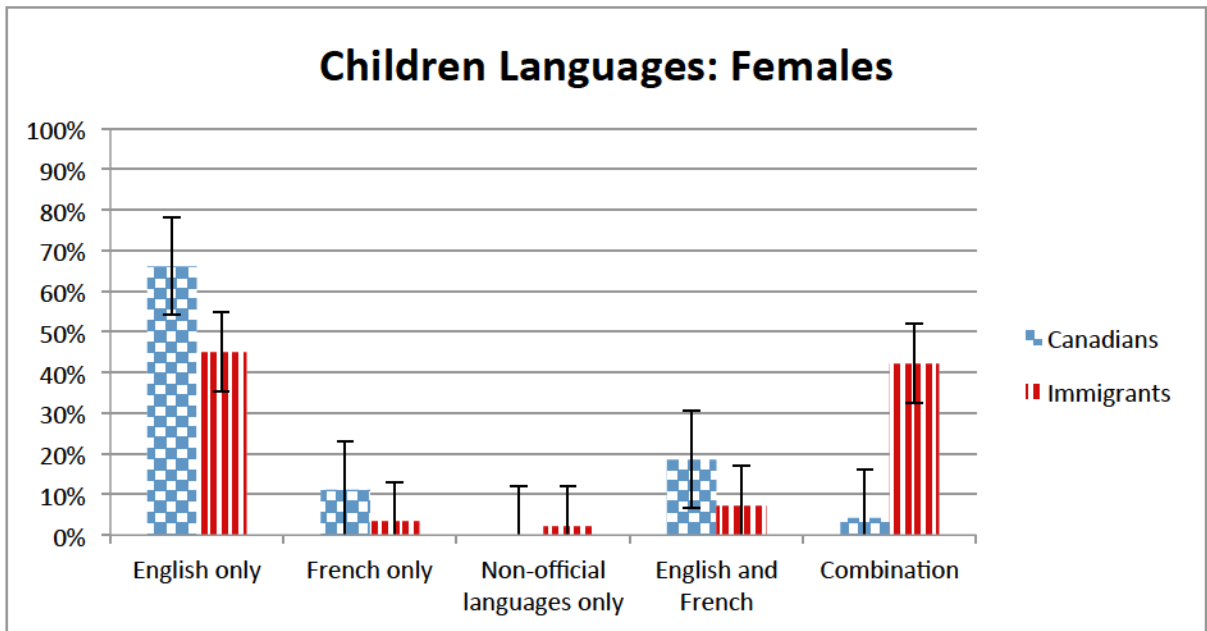


Figure 9. Language Spoken with Children for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 10. Language Spoken with Children for Canadians and Immigrants, Females



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Lastly, a final measure of language use provided by the Ethnic Diversity Survey is a report of the language in which the respondent chose to take the interview. Respondents can choose to answer the survey in English, French or in a non-official language. The majority of interviewees chose to answer all the questions in English, however, there are still a few feeling more comfortable when using their source country languages, presumably because their English skills are very limited.

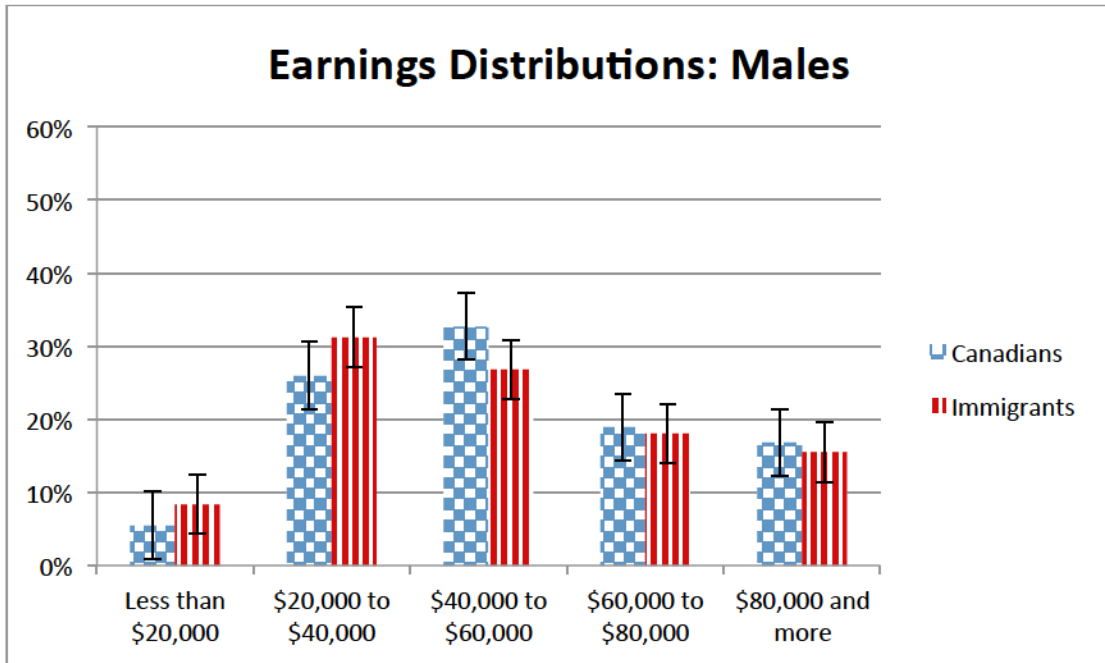
### **3.3 INCOME FROM EMPLOYMENT**

The earnings variable is constructed from two questions about income from last year and main source of income. The survey questions asked respondents “What was your main source of personal income for the past 12 months?” and “What is your best estimate of your total personal income, before taxes and deductions, from all sources in the past 12 months?.” Observations with the main source of income other than employment or self-employment are eliminated. Since the answers to the income questions are specified into \$10,000 income ranges, mid-point income of each income range is calculated and will be used in regressions. This is the best approximation of earnings available in the EDS.

Overall, the average earnings for the sample selected is \$45,642. Table 4 shows the average earnings for different people in different categories. Canadian-born workers make more money every year from their jobs than immigrant workers, though the difference is only around \$2000 to \$2300 for both men and women, which is relatively small comparing to the gap found in other studies.

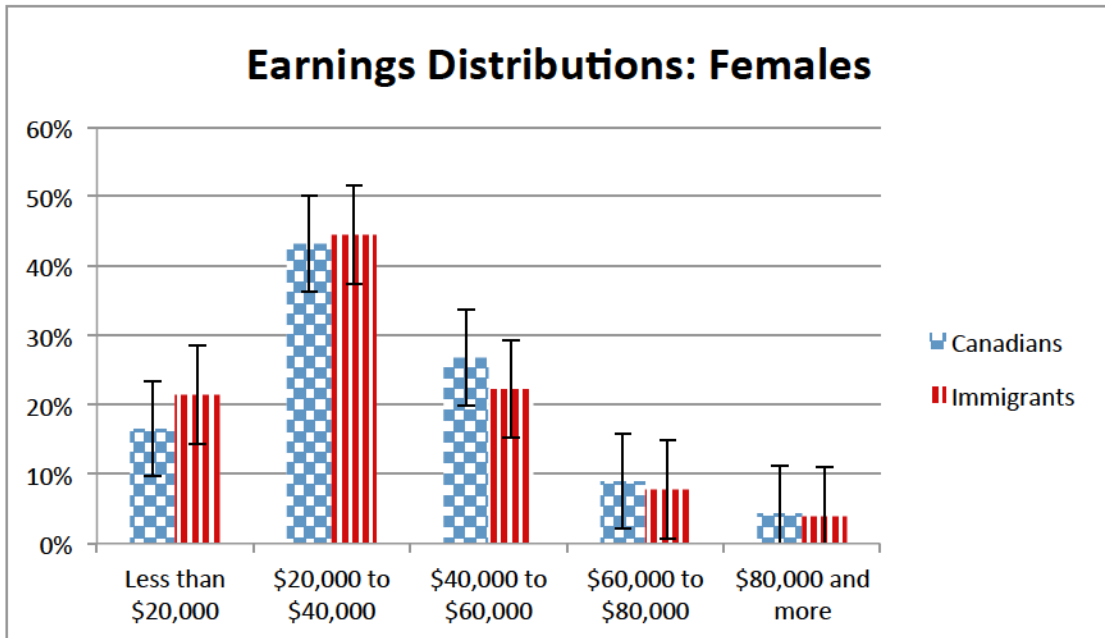
Figures 11 and 12 illustrate differences in the distribution of earnings for immigrants and native-born Canadians. As we can see, the percent of population in the top group, with annual earnings of \$80,000 or more, is almost the same for immigrants and native-born Canadians (i.e. about 16%). However, more immigrants than Canadian-born workers are also found in the lower earning groups, especially the lowest group (8% and 5% for male immigrants and male Canadian-born workers respectively; 21% and 17% for female immigrants and female Canadian-born workers respectively). Thus, inequality appears to be a more severe problem among immigrants. Combined with the fact that immigrants on average earn less than their Canadian counterparts discussed in the third part of this section, it is important to find out the reasons behind the earnings gap between native-born Canadians and immigrants.

Figure 11. Earning Distributions for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) are included.

Figure 12. Earning Distributions for Canadians and Immigrants, Females



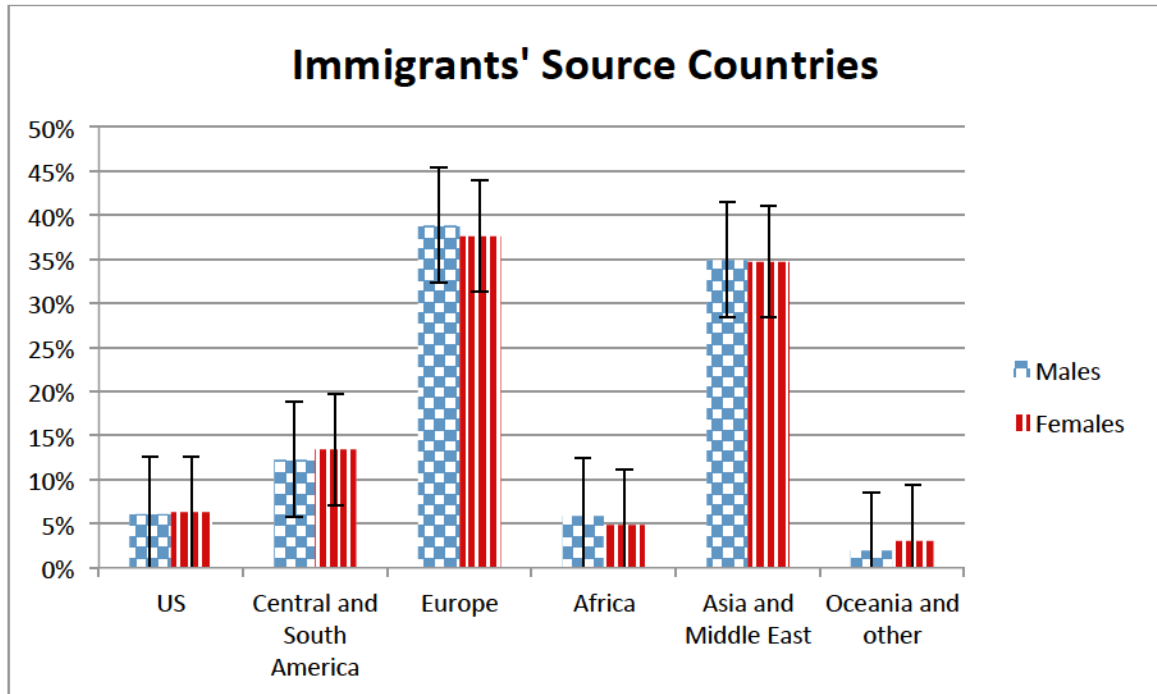
Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error (+/- 1 standard error) bars are included.

### **3.4 IMMIGRANTS vs. NATIVE-BORN CANADIANS**

As Chiswick and Miller (1995, 1996, 2001 and 2009) and Bleakley and Chin (2004) point out, due to different cultural backgrounds and resulting characteristics for immigrants and native-born citizens in the host country, the distribution of earnings and its determinants also differ. This section compares the determinants of earnings for immigrants and Canadian-born workers.

From the composition of respondents to the EDS survey, we can see in Figure 13 that the largest single source of immigrant workers to Canada is Europe, which contributes to the fact that almost 52% of immigrant workers are white. The share of visible minorities in Canada's immigrant population has become larger as people from China, India, the Philippines and other Latin American countries continue to contribute to population growth in Canada.

Figure 13. Immigrants' Source Countries, Males and Females



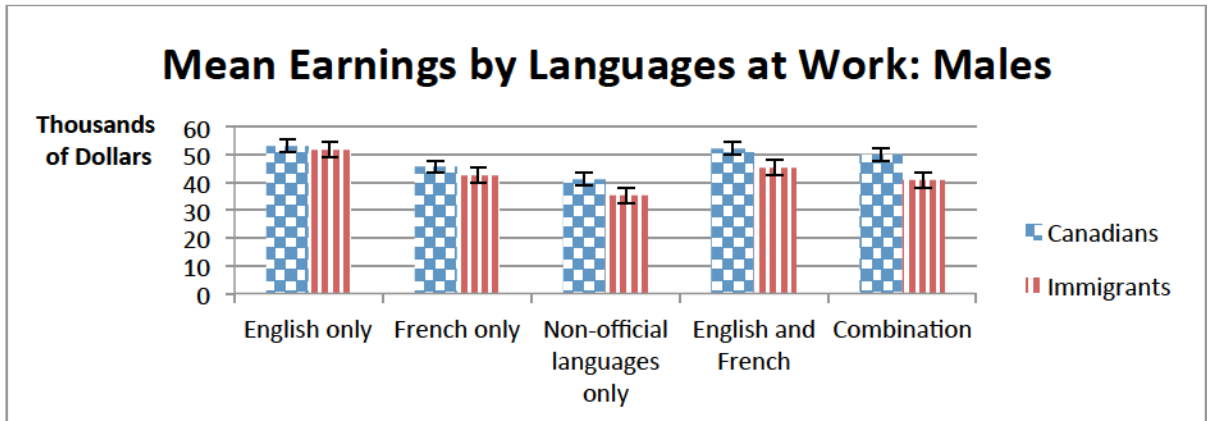
Note: 1. Standard error bars (+/- 1 standard error) are included.

Immigrants will bring diversity to Canada and fulfill the shortage of labor, but meanwhile, they also attract people's attention to income differences between immigrants and native-born Canadian workers. Proficiencies in the official languages play an important role in determining earnings for immigrants. Understanding the relationship between language proficiencies and annual earnings may help us understand the gap between immigrants and Canadian-born workers. Earnings' distributions in this sample show differences in income for immigrants and Canadian-born workers according to reported language use at work (see Figures 14 and 15). Generally for both immigrant and Canadian-born workers, using English or French or both at work is associated with more benefits in dollar terms. The difference in mean earnings between a worker who uses English at work and one that uses neither English nor French can be as large as \$12,000

per year. In fact, using English at work is associated with higher earnings than using French at work since the mean income for English users is higher by approximately \$7,000 for both men and women.

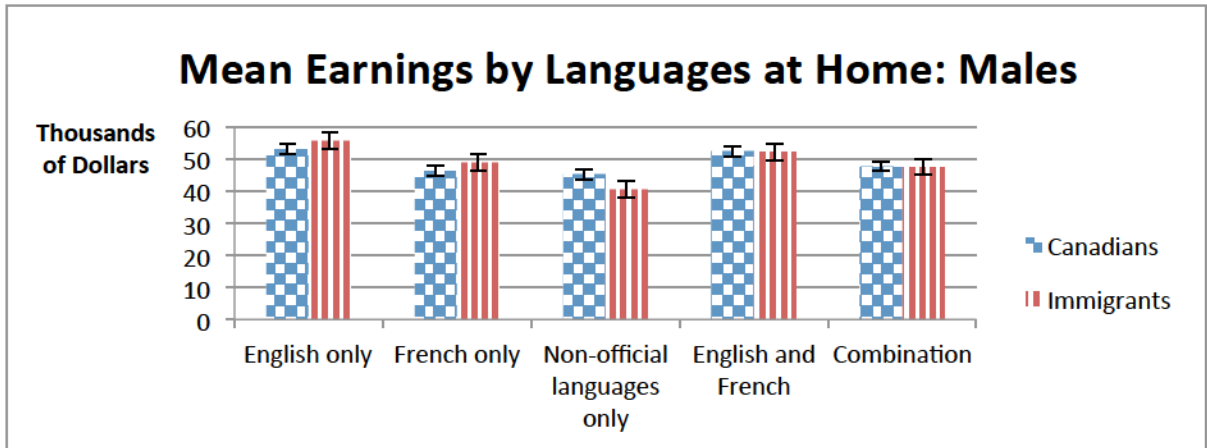
A brief look at mean earnings by languages used in alternative contexts is also provided in this section to provide a general idea of the relationship between earnings and languages spoken. In general, for both immigrants and Canadians, those who speak English and/or French have higher earnings than others who only speak non-official languages. Figures 14 to 16 show earnings difference based on languages used in different contexts for men and Figures 17 to 19 show earnings difference by context for women.

Figure 14. Mean Earnings by Languages Spoken at Work for Canadians and Immigrants, Males



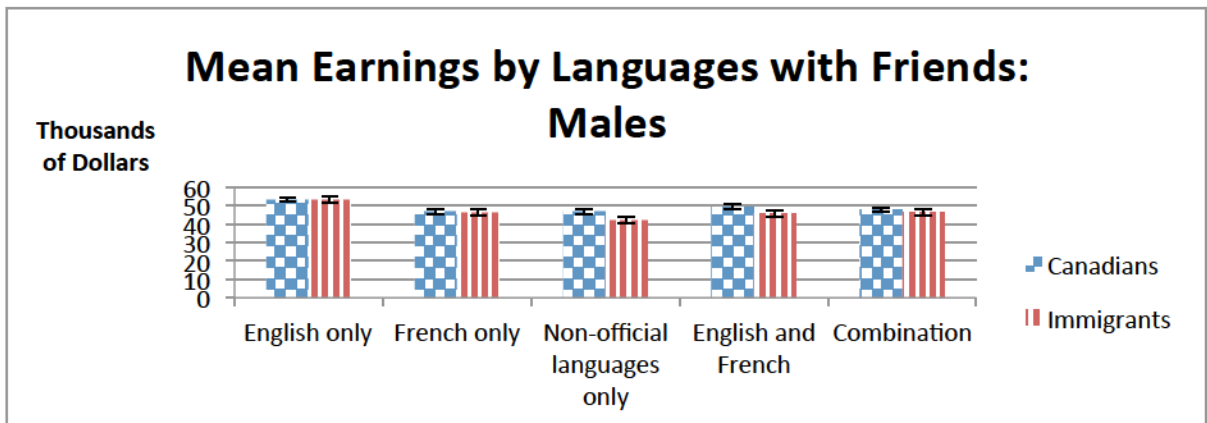
Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 15. Mean Earnings by Languages Spoken at Home for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

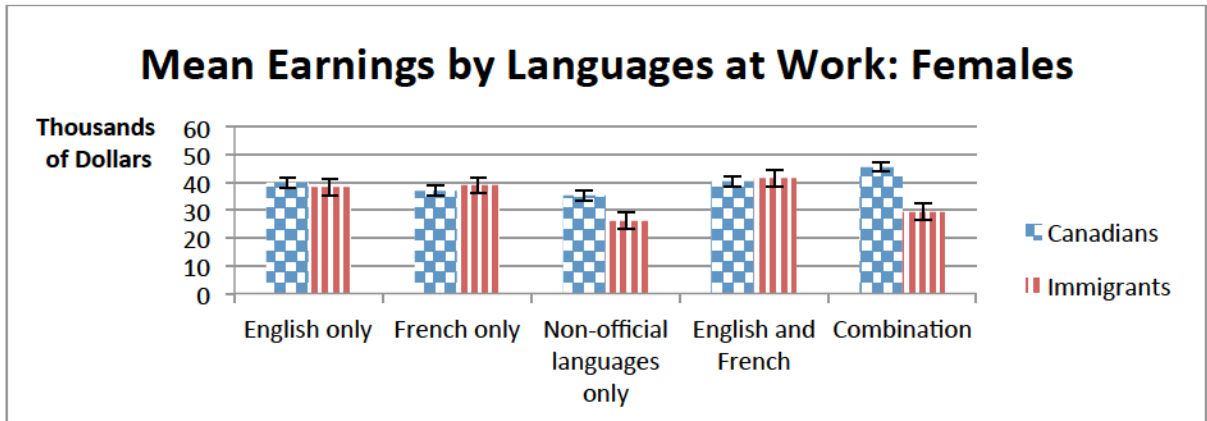
Figure 16. Mean Earnings by Languages Spoken with Friends for Canadians and Immigrants, Males



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

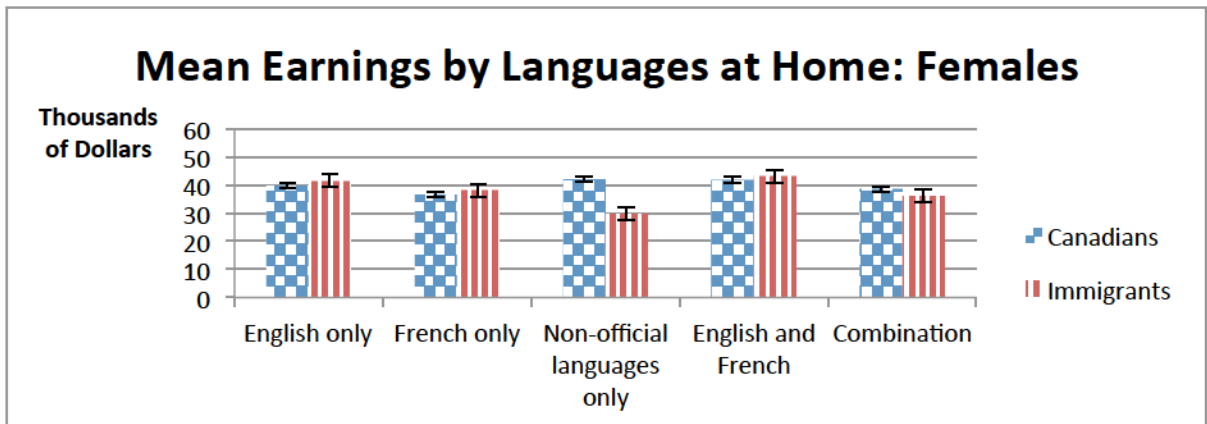


Figure 17. Mean Earnings by Languages Spoken at Work for Canadians and immigrants, Females



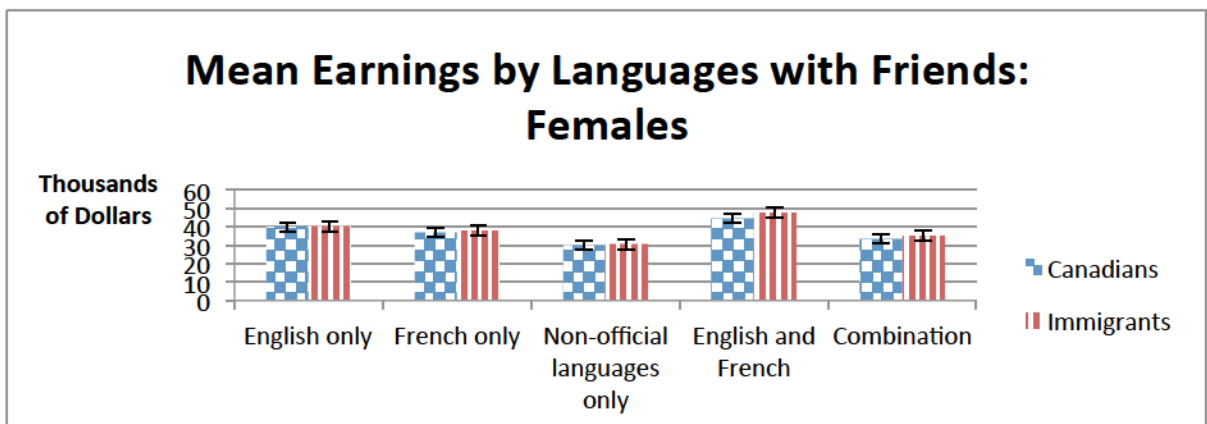
Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 18. Mean Earnings by Languages Spoken at Home for Canadians and Immigrants, Females



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

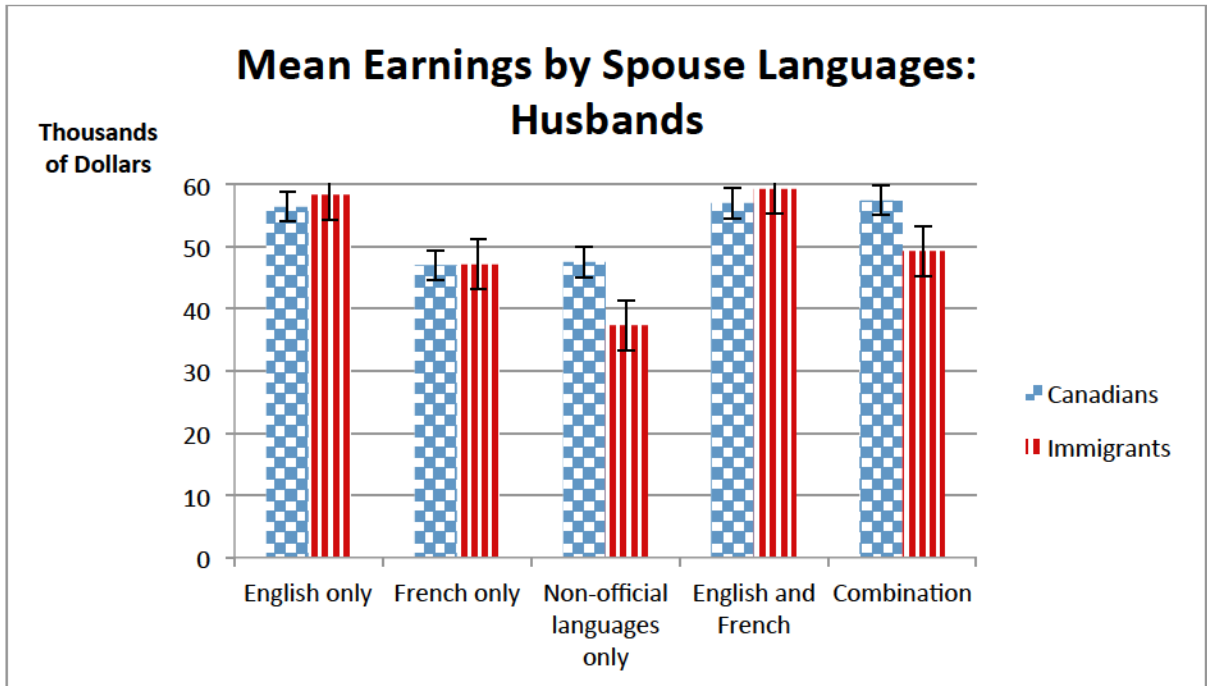
Figure 19. Mean Earnings by Languages Spoken with Friends for Canadians and immigrants, Females



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

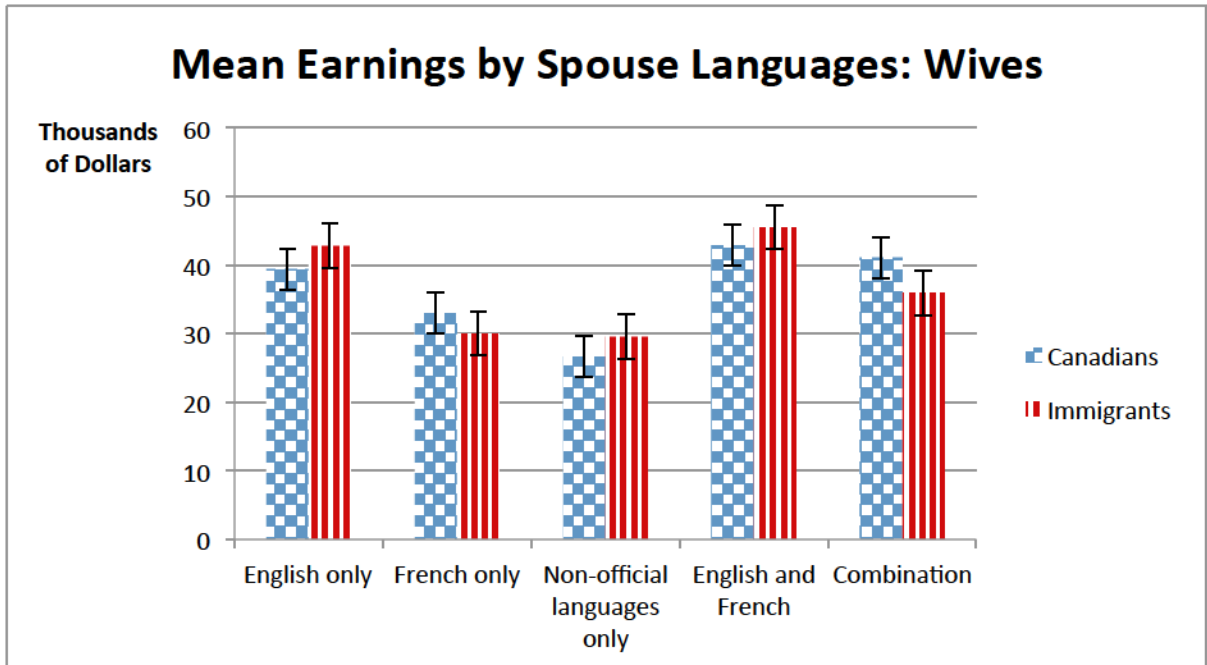
In the smaller sample where all the respondents are married and have at least one child, earnings differ by different language categories for both native- born Canadians and immigrants. Figures 20 and 21 show that generally people whose spouse speaks English and French have higher earnings than those whose spouse only speaks English or French. Respondents who have non-official-language-speaking spouses make the least money. Difference in earnings varies for native-born Canadians over immigrants according to their spouse's languages. The same earnings patterns apply to respondents who have children based on languages spoken by their children (see Figure 22 and 23).

Figure 20. Mean Earnings by Spouse Languages for Canadians and Immigrants, Husbands



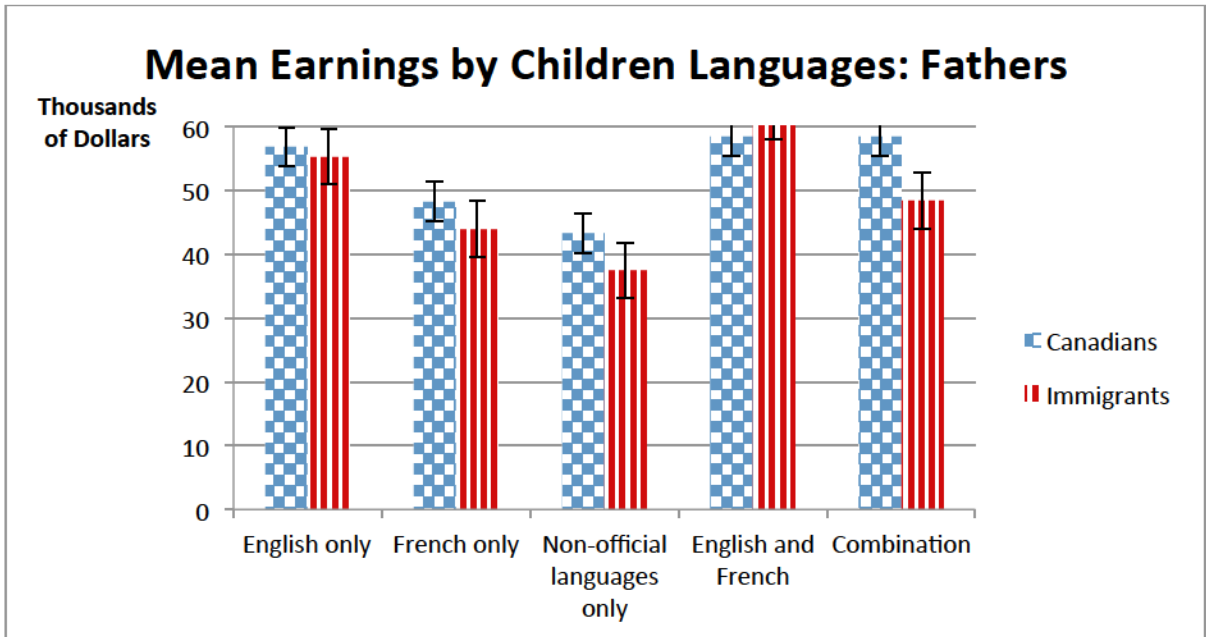
Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 21. Mean Earnings by Spouse Languages for Canadians and Immigrants, Wives



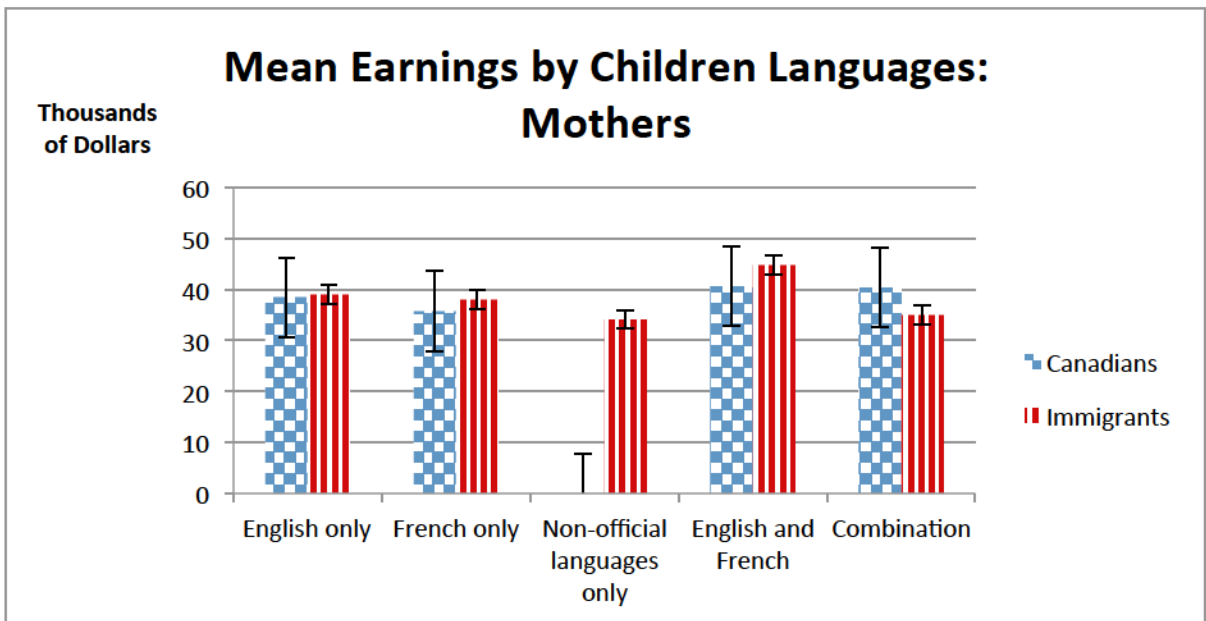
Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 22. Mean Earnings by Children Languages for Canadians and Immigrants, Fathers



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

Figure 23. Mean Earnings by Children Languages for Canadians and Immigrants, Mothers



Note: 1. "Canadians" refer to Native-born citizens. 2. Standard error bars (+/- 1 standard error) are included.

### **3.5 OTHER DETERMINANTS OF EARNINGS**

While the focus of this research is on language, it is also important to include other earnings' determinants in estimation models. Based on the famous Mincer Equation created by Jacob Mincer and widely used in their immigrant literature, working experience or age and education are two of the most important determinants of income (Mincer 1974, Bjorklund 2002; Lemieux 2006; Ferrer and Riddell 2008). Thus, age and education level are also in the model of earnings estimated in this study. In the EDS public use file, age is described in year ranges. Therefore, the mid-point age of each group is selected as the representative age for the group. Only prime age respondents (i.e. 25 to 54 years of age) are included in the data set to provide earning estimations. Education levels or degrees shown in the EDS are the highest one that a person has achieved. Dummy variables are created for each different highest degree listed in the survey.

In this study, the Mincer Equation is expanded to include other crucial earning determinants. Binary variables are generated for gender, marital status, number of children in a family, place of birth (on continent-level), visible minority status and the area where the interview took place.

The descriptive statistics for other earnings' determinants can be found in Table 5, which shows different patterns for immigrants and native-born Canadians regarding age, marital status, education levels, visible minority status and places of living. The average age for immigrants is two years younger than that of native-born Canadians. More than 90 percent of native-born Canadians are white and only half of the immigrants in this sample are Caucasians. The ethnic backgrounds for immigrants vary, with Chinese and

South Asians the two biggest visible minority groups and being 12 percent and 13 percent of the immigrants' population separately. Education levels also differ for immigrants and native-born Canadians as it turns out 6 percentage points more male immigrants and 4 percentage points more female immigrants have more advanced degrees such as Master's or Ph.D. than their native-born Canadian counterparts. While on the other hand, immigrants outnumber native-born Canadians in terms of lowest education level in this sample population by 3 percentage points. Moreover, 23 percentage points more native-born Canadians than immigrants live in areas with populations of less than 100,000, while immigrants are more likely to reside in large urban areas or cities such as Toronto and Vancouver.

## CHAPTER 4 EMPIRICAL ANALYSIS

### 4.1 MODEL

Based on the nature and characteristics of the Ethnicity Diversity Survey, Ordinary Least Squares regressions are used to estimate the language proficiency effects on the immigrants earning gap in Canada. The models used in this study will be in the following form:

$$\ln(\text{Earnings})_i = \alpha + \beta \text{Immigrant}_i + \gamma \text{Languages}_i + \delta \mathbf{X}_i + \mathbf{u}_i$$

The dependent variable used in this study is the natural logarithm of earnings. The interpretation of language effects is thus in terms of proportional change in immigrants' earnings.

The main indicator of earnings gap between immigrants and Canadians is the coefficient in front of variable "Immigrant", which takes the value one when an individual is an immigrant. The goal of creating this model is to test whether the earnings gap is reduced when language variables are added to a standard set of earnings determinants. Languages used in different contexts will be examined separately by adding sets of categorical variables describing language most-often used for each context separately (i.e. languages used at work, at home, at the EDS interview, with friends, with spouses and with children). The language variables will be added to the regression one at a time after controlling for the basic determinants of earnings. Then it is easy to compare which language-use context reduces the gap the most. And the difference in earnings

caused by specific context can also be easily found from the coefficients of language categories.

$X_i$  is a vector that includes other determinants of earnings such as immigrant worker's age, education level (measured in highest degree achieved), marital status, number of children in the family, place where the EDS interview took place and visible minority status. Factors that affect earnings but can't be measured in this study, such as duration in the host country, family background, work history in home countries, networking in the host country, will be included in the error term  $u_i$ .

Respondents who have spouses and children are analyzed separately so that languages spoken by spouses and children can be included as an explanatory variable. Separate regressions will be run for men and women given the possible gender differences in labor market experience and the role they play at work places. Some, such as construction sites, require less language abilities and are male-dominated, while office work requires more communications skills and attracts more women. A robustness check is made later in the paper by restricting the sample to individuals who worked full time or full year in 2002.

## **4.2 REGRESSION RESULTS**

As suggested by the existing literature, the earnings gap between immigrants and Canadians does exist and part of the gap can be explained by potential skills in using the official languages in Canada. The same results are found in this study. Table 6 shows that when not controlling any earnings' determinants, immigrant men on average earn almost 6% less than their Canadian counterparts, the gap for women is slightly lower at 5.4%.



After adding respondents' age, education levels and other control variables such as number of children in the family, visible minority status and location of residence, the earnings' gap drops to 4.0% for men. The common earnings' determinants help reduce 30% of the gap between Canadian men and immigrant men. Following the order of regressions, results for men will be discussed first, followed by those for women.

As previously hypothesized, the language-use variables help explaining the earnings gap between male immigrant and Canadian-born workers further. Language most often used at work explains almost 37% of the earning gap, which in this case remains statistically significant. Regression results show that men who only use English at work on average earn as much as 21% more than those who only speak a non-official languages at their jobs. This, to a degree, is consistent with the hypothesis that higher skills in using English helps immigrant workers earn more, however, speaking English is becoming a requirement for people to work in the mainstream economy in Canada, therefore, people who are obligated to speak English to make a living are not necessarily better at using English since they might prefer to use their home country languages any time other than working.

Language used at home is the most important context studied. Including the set of home-language variables reduces the earnings gap between male immigrant and Canadian-born workers, by 3.5 percentage points to only 0.6%, which means almost 85% of the gap has been explained. Moreover, the coefficient for "immigrant" dummy variable is not significantly different from 0, which means that after controlling for language spoken at home, we no longer find an earnings gap between male immigrant and Canadian-born workers. In terms of the language variables themselves, if a man

speaks only non-official languages at home, he earns almost 25 percent less than their counterparts who only use English at home (see Table 6).

When controlling “languages spoken with friends”, the earnings gap is reduced to 2.8%, a smaller Canadian-born/immigrant gap than when work language is controlled. In other words, language spoken with friends explains more of the gap than language spoken at work. As mentioned before, if a person has many English-speaking friends and speaks English with friends, he or she might be relatively better at communicating in English than others who only speak non-official languages with their friends. Language coefficients indicate once again that people who speak English most often with friends have higher earnings than their counterparts who speak all the other languages.

After controlling “Language at interview”, the earnings gap becomes 4.3%, which is lower than the initial gap when there are no controlled variables in the model, however, is higher than the one when common earning determinants are controlled. We know that interviews tend to be conducted in the languages that interviewees are most comfortable with, but a 30-minute interview may not be as good an indicator of potential language fluency as other contexts.

When a single dummy variable indicating that a man uses English in all the contexts mentioned above is added to the regression, the earnings’ gap is reduced to 1.9% but also remains significant.

Similar results are found for women. The original earnings gap between female immigrant and Canadian-born workers is 5.4%, which is 0.6 percentage points less than the one for men. However, after adding the basic earnings’ determinants to the model, the gap for women is reduced by 2.5 percentage points to 2.9%. The reduction is larger for

women than that for men. What's more, the effects of different language contexts on reducing the earnings gap are similar to the ones for men, but once again, the reduction of the earnings gap is larger for women.

As we can see from Table 7, language at work helps reducing the earnings gap to 2.6%. When languages spoken with friends are included in the model, the coefficient of the "immigrant" dummy variable falls in size and is no longer statistically significant. As was true for men, language spoken at home is the most important determinant in terms of reducing the earnings' gap between female Canadian-born workers and female immigrant workers. Again, including home language in the model means there is no longer a statistically significant difference in terms of earnings between Canadian-born and immigrant workers for women. Women who only speak non-official languages at home earn 24% less than those who use English. For all language contexts, estimated models show that female workers who speak English earn more than people who speak any other language, including French. Women who speak non-official languages earn the least.

When adding the dummy variable that indicates English used in all contexts (at home, at work, with friends and at the interview), the earning gap is reduced substantially for women to 1.6%, though it remains statistically significant.

### **4.3 SPOUSE AND CHILDREN**

A reduced sample that only contains respondents who are married and have at least one child is used to test how languages spoken by spouse and children are associated with respondents' earnings, since it is plausible that workers with non-English speaking

families will be less proficient. The same regression strategies are used in the small sample and separate analyses are provided for men and women.

Interestingly, the earning gap between Canadian-born and immigrant workers is bigger for married men with children than for all men in the sample. As shown in Table 8, for married men, Canadian-born workers on average earn 14.3% more than immigrant workers in the year 2002. What is also interesting is that when common earning determinants are considered in the regressions, the gap is reduced to 5.9%, which is less than half of what it used to be. The scale of reduction is also more than for the general men's sample. When spouse and children's languages are added, the gap is reduced to 4.5% and 4.2% respectively, but remains statistically significant. Male workers who have an English-speaking wife can make as much as 29% more than those whose wife only speaks non-official languages, perhaps in part because men who have to speak English with their wife will spend more time practicing so that their fluency is relatively higher, which in this case is related to higher earnings as well.

In contrast with the results for men, the earnings gap for married women with children is not much bigger than the one for the general women's sample. When standard earnings determinants are added, the immigrant gap disappears. In terms of husband and children's languages, women who have a non-English speaking husband or child earn 30% less than those who have English-speaking husbands or children in the year 2002 (see Table 9).

The other interesting point found in this smaller sample is that people whose children speak both English and French have substantially higher earnings than those whose children only speak English. The difference in earnings is 15.7% for men and

13.5% for women and is significant for both men and women. However, there might be potential reverse causation explaining this association if wealthier parents are more likely to afford to send their children to French immersion schools and consequently their children are able to speak both English and French.

In an attempt to separate the language effects and the assimilation effects that spouses have on respondents in the sample, a new dummy variable that indicates a spouse is an immigrant when it takes the value “1” and a native-born Canadian when taking the value “0” is added in the model. Since native-born Canadian spouses tend to not only speak the official languages fluently but also have broader networks in Canada, the effects of spouse language on respondents’ earnings are assumed to be different in this sample. In order to further test this hypothesis, interaction terms between spouses’ immigration status and their languages as well as the immigration status for spouses themselves are added in the model. Negative coefficients are expected for both the immigration status dummy variable and the interaction terms.

The results are, however, not evident enough to draw any conclusions from. For women, the coefficients for both the status dummy variable and interaction terms are negative as expected, which means, for speaking the same language, a native-born Canadian spouse can help the respondent achieve higher earnings than an immigrant spouse. The difference in earnings for respondents in the sample can be attributed to networks in the job market, cultural assimilation and other determinants that indirectly affect respondents’ earnings. For men, positive coefficients for interaction terms are found in the new regressions, which contradicts the original assumption. Overall, the



significance of the interaction terms for both men and women is not strong enough to draw any substantial conclusion.

#### **4.4 OTHER EARNINGS DETERMINANTS**

Results for other factors that affect earnings are similar to those reported elsewhere (see Appendix Table A1, A2, A3 and A4). Returns to education are positive and are generally higher for women than men with the same education level. But foreign credentials are not as helpful since the returns to foreign education are significantly lower than the returns to Canadian degrees. A man graduating from a Canadian educational institution on average earns 15% to 16% more than a foreign graduate with the same degree, while a female graduate from a Canadian school can earn 17% more than her counterparts graduating from overseas.

Another interesting finding is that the number of children in a family has different association with earnings for men and women. For men, the association is positive. However, the association between earnings and children is negative for women. Women tend to be better off in terms of earnings if they don't have any child to look after and a woman with more than 4 children earns almost 8% less than those without children.

People who live in bigger cities like Toronto or Vancouver earn more, people with visible minority status earn less, though Chinese and South Asians seem to do better than people from other races. Other results can also be found in tables in the Appendix Table A1, A2, A3 and A4.

## CHAPTER 5 CONCLUSION

This paper studies the effects of language abilities on immigrants' economic well-being in Canada using data from the 2002 Ethnic Diversity Survey. By selecting six different contexts where English, French or other languages are used, the earnings gap between immigrant and Canadian-born workers is reduced by different amounts. Generally, for all the contexts examined in this paper, immigrants who speak English have higher earnings than immigrants who use either French or non-official languages. Immigrants who speak only non-official languages in any of the contexts earn the least. Among all the contexts, home language helps reduce the earnings gap the most as the gap becomes insignificantly different from zero and nearly disappears. Moreover, as results from the sample population shows, speaking English at home corresponds to up to 25% higher in earnings. This result can be potentially interpreted so that languages spoken at home affect the relative fluency in the Canadian official languages the most since immigrants spend most of their non-working time at home and quite likely speak their source country languages with families. Languages spoken in other contexts also help reduce the earnings gap but are not able to totally eliminate it. Other earnings determinants also affect the gap and the effects are similar to those found in other studies. However, due to limited information that EDS provides in this study, possible earnings and language competency determinants such as duration of immigration and working experience in home country cannot be included in the model to better explain the earnings gap. Future study should focus on adopting data that contain richer information from both immigrants and Canadian-born workers and measuring fluency from a broader perspective in order to better explain the linguistic effects on earnings.

Immigrants make important contributions to domestic economies and helping immigrants settle down is many countries' priority in their immigration policies. However, being able to speak the destination countries' official languages helps immigrants adapt themselves easier and faster. Policies regarding screening language competency prior to admitting new immigrants and promoting frequent use of official languages after immigrating will benefit both immigrants themselves and the economy of the host countries.



**Table 1. Language at Work and Home by Nativity**

<b>Language Categories</b>	<b>New Classifications</b>
English Only	English Only
French Only	French Only
English and French	English and French
English and Non-official Languages French and Non-official Languages English and French With Non-official Languages	Combinations
Non-official Language Only Non-official Languages Only	Non-official languages

**Table 2. Number of Observations by Languages Spoken in Different Contexts for Males and Females, Canada 2002**

Language Categories	Definitions	Contexts							
		At Work		At Home		With Friends		All	
		M	F	M	F	M	F	M	F
English Only	Only English is used.	6352	5543	5186	4553	5943	5196	5084	4452
French Only	Only French is used.	936	849	848	771	968	344	N/A	N/A
English and French Only	Only English and French are used.	159	179	273	269	94	100	N/A	N/A
Non-official Languages	Either one non-official language or multiple non-official languages are used.	119	85	344	275	384	354	N/A	N/A
Combination	English and non-official language(s), French and non-official language(s) or English and French and non-official language(s) are used.	76	75	991	863	253	218	N/A	N/A
<b>Total Number of Observations</b>		<b>7642</b>	<b>6731</b>	<b>7642</b>	<b>6731</b>	<b>7642</b>	<b>6731</b>	<b>5084</b>	<b>4452</b>
		<b>14373</b>		<b>14373</b>		<b>14373</b>		<b>9536</b>	

**Table 3. Number of Observations by Spouse and Children's Languages for Males and Females, Canada 2002**

Language Categories	Spouse Languages		Children Languages	
	Males	Females	Males	Females
English only	2536	2127	2452	2174
French only	175	134	335	324
English and French	692	505	527	555
Non-official Language	158	72	54	22
Combination	1338	1039	611	538
<b>Total Number of Observations</b>	<b>4899</b>	<b>3877</b>	<b>3979</b>	<b>3613</b>

**Table 4. Average Earnings for Native-born Canadians and Immigrants by Gender, Canada 2002**

	<b>Native- born Canadians</b>	<b>Immigrants</b>
<b>Males</b>	\$52,052	\$49,671
<b>Females</b>	\$39,494	\$37,534

**Table 5. Descriptive Statistics for Earnings Determinants by Gender, Native-born Canadians and Immigrants**

Variables	Native-born Canadians		Immigrants	
	Males	Females	Males	Females
<b>Age</b>	39.569 (8.226)	39.588 (8.415)	41.657 (7.623)	41.502 (7.753)
<b>Earnings</b>	52052 (19379)	39494 (16934)	49671 (20282)	37534 (16778)
<b>Married</b>	0.612 (0.488)	0.558 (0.497)	0.755 (0.430)	0.663 (0.473)
<b>Number of children:</b>				
No child	0.437 (0.497)	0.454 (0.498)	0.332 (0.471)	0.319 (0.466)
One child	0.181 (0.385)	0.204 (0.403)	0.201 (0.401)	0.214 (0.410)
Two children	0.265 (0.441)	0.248 (0.432)	0.312 (0.464)	0.335 (0.472)
Three children	0.09 (0.288)	0.076 (0.266)	0.119 (0.324)	0.105 (0.306)
Four or more children	0.027 (0.161)	0.017 (0.266)	0.035 (0.184)	0.027 (0.162)
<b>Visible minorities:</b>				
White	0.925 (0.263)	0.920 (0.271)	0.527 (0.499)	0.519 (0.500)
Chinese	0.024 (0.153)	0.022 (0.148)	0.122 (0.328)	0.121 (0.327)
Black	0.015 (0.121)	0.020 (0.141)	0.057 (0.232)	0.066 (0.249)
South Asian	0.009 (0.093)	0.013 (0.111)	0.133 (0.340)	0.110 (0.313)
Filipino	0.005 (0.069)	0.004 (0.063)	0.036 (0.185)	0.074 (0.262)
Latin American	0.002 (0.042)	0.002 (0.044)	0.032 (0.176)	0.026 (0.158)
<b>Highest degree achieved:</b>				
Less than high school	0.109 (0.312)	0.064 (0.245)	0.127 (0.334)	0.090 (0.286)
High school	0.232 (0.422)	0.216 (0.412)	0.187 (0.390)	0.220 (0.412)
College	0.069 (0.253)	0.073 (0.260)	0.054 (0.225)	0.066 (0.248)
Some university	0.057 (0.231)	0.055 (0.228)	0.047 (0.211)	0.044 (0.205)
University diploma	0.26 (0.439)	0.269 (0.443)	0.203 (0.402)	0.226 (0.418)
Bachelor's	0.209 (0.407)	0.263 (0.440)	0.258 (0.437)	0.252 (0.434)
Master's or Ph.D.	0.064 (0.246)	0.061 (0.239)	0.124 (0.330)	0.103 (0.304)
<b>Highest degree achieved in Canada</b>	0.984 (0.124)	0.990 (0.101)	0.482 (0.500)	0.483 (0.500)
<b>Census metropolitan areas:</b>				
Toronto	0.148 (0.355)	0.160 (0.367)	0.391 (0.488)	0.403 (0.491)
Montreal	0.092 (0.290)	0.092 (0.289)	0.101 (0.301)	0.098 (0.297)
Vancouver	0.060 (0.238)	0.065 (0.246)	0.120 (0.325)	0.132 (0.339)
Other areas	0.345 (0.475)	0.352 (0.478)	0.269 (0.443)	0.261 (0.440)
Non-census areas	0.354 (0.478)	0.332 (0.471)	0.119 (0.324)	0.106 (0.308)
<b>Total number of observations</b>	<b>5682</b>	<b>5094</b>	<b>1883</b>	<b>1565</b>
		10776		3448

Note: 1. Standard deviations are in parentheses.

**Table 6. Language Effects on Men's Earnings Gap, Canada 2002**

	<b>Immigrant Only</b>	<b>Earning Determinants</b>	<b>Work</b>	<b>Home</b>	<b>Friends</b>	<b>Interview</b>
<b>Immigrant</b>	-0.060*** (0.012)	-0.040*** (0.014)	-0.038*** (0.014)	-0.006 (0.014)	-0.028** (0.014)	-0.043*** (0.014)
<b>Work:</b>						
French Only			-0.117*** (0.016)			
Non-official Languages Only			-0.207*** (0.040)			
English and French Only			-0.081** (0.033)			
Combination			-0.138*** (0.047)			
<b>Home:</b>						
French Only				-0.091*** (0.016)		
Non-official Languages Only				-0.248*** (0.027)		
English and French Only				-0.043* (0.024)		
Combination				-0.115*** (0.018)		
<b>Friends:</b>						
French Only					-0.088*** (0.015)	
Non-official Languages Only					-0.181*** (0.026)	
English and French Only					-0.064* (0.041)	
Combination					-0.099*** (0.029)	
<b>Interview:</b>						
French Only						-0.098*** (0.015)
Other Languages						-0.177*** (0.039)
<b>N</b>	7565	7565	7565	7565	7565	7565
<b>R<sup>2</sup></b>	0.0038	0.2103	0.2196	0.2237	0.2197	0.2168

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
 \*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.  
 3. Other variables included and reported in Appendix A1.

**Table 7. Language Effects on Women's Earnings Gap, Canada 2002**

	<b>Immigrant Only</b>	<b>Earning Determinants</b>	<b>Work</b>	<b>Home</b>	<b>Friends</b>	<b>Interview</b>
<b>Immigrant</b>	-0.054*** (0.012)	-0.029** (0.014)	-0.026* (0.014)	0.004 (0.015)	-0.012 (0.014)	-0.030** (0.014)
<b>Work:</b>						
French Only			-0.024* (0.014)			
Non-official Languages Only			-0.176*** (0.038)			
English and French Only			0.014 (0.027)			
Combination			-0.197*** (0.045)			
<b>Home:</b>						
French Only				-0.038*** (0.015)		
Non-official Languages Only				-0.242*** (0.027)		
English and French Only				0.017 (0.022)		
Combination				-0.108*** (0.016)		
<b>Friends:</b>						
French Only					-0.036*** (0.014)	
Non-official Languages Only					-0.179*** (0.024)	
English and French Only					0.068* (0.035)	
Combination					-0.133*** (0.028)	
<b>Interview:</b>						
French Only						-0.030** (0.014)
Other Languages						-0.100*** (0.039)
<b>N</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>
<b>R<sup>2</sup></b>	<b>0.0031</b>	<b>0.2467</b>	<b>0.2510</b>	<b>0.2574</b>	<b>0.2548</b>	<b>0.2477</b>

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
 \*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.  
 3. Other variables included and reported in Appendix A2.

**Table 8. Language Effects on Earnings Gap of Married Men with Children, Canada 2002**

	<b>Immigrant Status Only</b>	<b>Common Earning Determinants</b>	<b>Spouse Language</b>	<b>Children Language</b>
<b>Immigrant</b>	-0.143*** (0.015)	-0.059*** (0.019)	-0.045** (0.019)	-0.042** (0.019)
<b>Spouse:</b>				
French Only			-0.147*** (0.033)	
Non-official Languages Only			-0.296*** (0.045)	
English and French Only			-0.008 (0.019)	
Combination			-0.062*** (0.018)	
<b>Children:</b>				
French Only				-0.138*** (0.029)
Non-official Languages Only				-0.276*** (0.054)
English and French Only				0.157*** (0.029)
Combination				-0.138*** (0.025)
<b>N</b>	<b>3481</b>	<b>3481</b>	<b>3481</b>	<b>3481</b>
<b>R<sup>2</sup></b>	<b>0.0273</b>	<b>0.1930</b>	<b>0.2090</b>	<b>0.2108</b>

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
 \*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.  
 3. Other variables included and reported in Appendix A3.



**Table 9. Language Effects on Earnings Gap of Married Women with Children,  
Canada 2002**

	<b>Immigrant Status Only</b>	<b>Common Earning Determinants</b>	<b>Spouse Language</b>	<b>Children Language</b>
<b>Immigrant</b>	-0.066*** (0.018)	-0.006 (0.024)	0.011 (0.024)	0.010 (0.024)
<b>Spouse:</b>				
French Only			-0.046 (0.034)	
Non-official Languages Only			-0.146*** (0.052)	
English and French Only			0.019 (0.022)	
Combination			-0.049** (0.021)	
<b>Children:</b>				
French Only				-0.025 (0.028)
Non-official Languages Only				-0.111 (0.104)
English and French Only				0.135*** (0.032)
Combination				-0.106*** (0.026)
<b>N</b>	<b>2629</b>	<b>2629</b>	<b>2629</b>	<b>2629</b>
<b>R<sup>2</sup></b>	<b>0.0052</b>	<b>0.2387</b>	<b>0.2425</b>	<b>0.2443</b>

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
 \*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.  
 3. Other variables included and reported in Appendix A4.

## References

- Abdurrahman, A., & Skuterud, M. (2005). Explaining the deteriorating entry earnings of Canada's immigrant cohorts, 1966-2000. *Canadian Journal of Economics*, 38(2), 641-672.
- Björklund, A., & Kjellström, C. (2002). Estimating the returns to investments in education: How useful is the standard Mincer equation? *Economics of Education Review*, 21(3), 195-210.
- Bleakley, H., & Chin, A. (2004). Language skills and earnings: Evidence from childhood immigrants. *The Review of Economics and Statistics*, 86(2), 481-496.
- Bloom, D. E., Grenier, G., & Gunderson, M. (1994). The changing labor market position of Canadian immigrants. *National Bureau of Economic Research Working Paper Series, No. 4672* Retrieved from <http://www.nber.org/papers/w4672>; <http://www.nber.org/papers/w4672.pdf>
- Boyd, M. (2009). Language at work: The impact of linguistic enclaves on immigrant economic integration. *Canadian Labor Market and Skills Researcher Network Working Paper Series, NO.41*
- Carlner, G. (2000). The language ability of U.S. immigrants: Assimilation and cohort effects. *International Migration Review*, 34(1), 158-182.
- Chiswick, B. R., Lee, Y. L., & Miller, P. W. (2005). Immigrant earnings: A longitudinal analysis. *Review of Income and Wealth*, 51(4), 485-503.
- Chiswick, B. R., & Miller, P. W. (1992). Language in the immigrant labor market. *Immigration, language and ethnicity: Canada and the united states* (pp. 229-296). Washington D.C.: American Enterprise Institute.
- Chiswick, B. R., & Miller, P. W. (2001). A model of destination-language acquisition: Application to male immigrants in Canada. *Demography*, 38(3), 391-409.
- Chiswick, B. R., & Miller, P. W. (2002). Immigrant earnings: Language skills, linguistic concentrations and the business cycle. *Journal of Population Economics*, 15(1), 31-57.
- Chiswick, B. R., & Miller, P. W. (2003). The complementarity of language and other human capital: Immigrant earnings in Canada. *Economics of Education Review*, 22(5), 469-480.
- Chiswick, B. R., & Miller, P. W. (2009). The international transferability of immigrants' human capital. *Economics of Education Review*, 28(2), 162-169.

- Ferrer, A., Green, D. A., & Riddell, W. C. (2006). The effect of literacy on immigrant earnings. *The Journal of Human Resources*, 41(2), 380-410.
- Ferrer, A., & Riddell, W. C. (2008). Education, credentials, and immigrant earnings. *Canadian Journal of Economics*, 41(1), 186-216.
- Green, D. A., & Worswick, C. (2003). Entry earnings of immigrant men in Canada: The roles of labor market entry effects and returns to foreign experience. *Canadian Immigration: Economic Evidence for A Dynamic Policy Environment*, , 77-110.
- Lemieux, T. (2006). The "Mincer equation" thirty years after: Schooling, experience and earnings *Jacob Mincer A pioneer of modern labor economics* (pp. 127-145). US: Springer.
- Li, P. S., & Dong, C. (2007). Earnings of Chinese immigrants in the enclave and mainstream economy. *Canadian Review of Sociology*, 41(1), 65-99.
- Man, G. (2004). Gender, work and migration: Deskillling Chinese immigrant women in Canada. *Women's Studies International Forum*, 27(2), 135-148.
- Mincer, J. (1974). *Schooling, experience and earnings*. New York: University of Columbia Press for the National Bureau of Economics Research.
- Schaafsma, J., & Sweetman, A. (2001). Immigrant earnings: Age at immigration matters. *The Canadian Journal of Economics*, 34(4), 1066-1099.
- Statistics Canada. (2010). Population and dwelling counts, for Canada, provinces and territories, 2006 and 2001 censuses, 100% data. Retrieved June 20, 2012, from <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/hlt/97-550/Index.cfm?TPL=P1C&Page=RETR&LANG=Eng&T=101>
- Statistics Canada. (2011). 2006 census: Immigration in Canada: A portrait of the foreign-born population, 2006 census: Highlights. Retrieved June 20, 2012, from <http://www12.statcan.ca/census-recensement/2006/as-sa/97-557/p1-eng.cfm>
- Statistics Canada. (2011). Immigrant status (4) for the population of Canada, provinces and territories, 1911 to 2006 censuses-20% sample data. Retrieved June 20, 2012, from <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=89423&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=72&VID=0&VNAMEE=&VNAMMEF=#DQF>
- Wang, S., & Lo, L. (2005). Chinese immigrants in Canada: Their changing composition and economic performance. *International Migration*, 43(3), 35-71.

# APPENDIX A OLS ESTIMATES FOR OTHER EARNINGS DETERMINANTS

**Table A1. Regression Results on Other Earnings Determinants for Men, General**

	Common Earning Determinants	Language at Work	Language at Home	Language with Friends	Language at Interview
Age	0.031*** (0.006)	0.030*** (0.006)	0.031*** (0.006)	0.032*** (0.006)	0.031*** (0.006)
Age <sup>2</sup>	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0003*** (0.0001)
Married	0.114*** (0.011)	0.106*** (0.011)	0.107*** (0.011)	0.108*** (0.011)	0.105*** (0.011)
<b>Number of Children:</b>					
One	0.056*** (0.013)	0.061*** (0.013)	0.060*** (0.013)	0.062*** (0.013)	0.060*** (0.013)
Two	0.077*** (0.012)	0.082*** (0.012)	0.080*** (0.012)	0.083*** (0.012)	0.081*** (0.012)
Three	0.085*** (0.017)	0.087*** (0.017)	0.088*** (0.016)	0.088*** (0.017)	0.088*** (0.017)
Four or more	0.091*** (0.028)	0.092*** (0.028)	0.095*** (0.028)	0.095*** (0.028)	0.089*** (0.028)
<b>Visible Minority Status:</b>					
Chinese	-0.088*** (0.023)	-0.072*** (0.022)	-0.029* (0.023)	-0.050** (0.023)	-0.068*** (0.023)
Black	-0.128*** (0.028)	-0.133*** (0.028)	-0.148*** (0.028)	-0.133*** (0.028)	-0.127*** (0.028)
South Asian	-0.076*** (0.024)	-0.077*** (0.024)	-0.037* (0.024)	-0.060** (0.024)	-0.069*** (0.024)
Filipino	-0.212*** (0.042)	-0.222*** (0.042)	-0.196*** (0.042)	-0.191*** (0.041)	-0.223*** (0.042)
Latino	-0.167*** (0.046)	-0.155*** (0.046)	-0.129*** (0.046)	-0.162*** (0.046)	-0.152*** (0.047)
<b>Highest Degree Achieved in Canada (Dummy)</b>	0.167*** (0.018)	0.152*** (0.018)	0.112*** (0.018)	0.126*** (0.018)	0.156*** (0.018)
<b>Education Level:</b>					
Master's or Ph.D.	0.340*** (0.017)	0.333*** (0.017)	0.339*** (0.017)	0.334*** (0.017)	0.337*** (0.017)
Bachelor's	0.266*** (0.013)	0.262*** (0.013)	0.265*** (0.013)	0.265*** (0.013)	0.263*** (0.013)
University Diploma	0.119*** (0.013)	0.117*** (0.013)	0.119*** (0.013)	0.119*** (0.013)	0.118*** (0.013)
Some University	0.121*** (0.022)	0.113*** (0.022)	0.114*** (0.022)	0.116*** (0.022)	0.113*** (0.022)
Some College	0.048*** (0.020)	0.048** (0.020)	0.049** (0.020)	0.046** (0.020)	0.046** (0.020)
Less than High School	-0.084*** (0.017)	-0.073*** (0.017)	-0.074*** (0.017)	-0.072*** (0.017)	-0.075*** (0.017)
<b>Census Metropolitan Areas:</b>					
Toronto	0.132*** (0.013)	0.117*** (0.013)	0.130*** (0.013)	0.125*** (0.013)	0.120*** (0.013)
Montreal	-0.027* (0.017)	0.040** (0.019)	0.020 (0.018)	0.019 (0.019)	0.027 (0.019)
Vancouver	0.062*** (0.018)	0.052*** (0.018)	0.056*** (0.018)	0.056*** (0.018)	0.054** (0.018)
Other Areas	0.047*** (0.011)	0.039*** (0.011)	0.044*** (0.011)	0.041*** (0.011)	0.040*** (0.011)
N	7565	7565	7565	7565	7565
R <sup>2</sup>	0.2103	0.2196	0.2237	0.2197	0.2168

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
 \*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.

**Table A2. Regression Results on Other Earnings Determinants for Women, General**

	<b>Common Earning Determinants</b>	<b>Language at Work</b>	<b>Language at Home</b>	<b>Language with Friends</b>	<b>Language at Interview</b>
<b>Age</b>	0.047*** (0.006)	0.047*** (0.006)	0.048*** (0.006)	0.048*** (0.006)	0.047*** (0.006)
<b>Age<sup>2</sup></b>	-0.0005*** (0.0001)	-0.0005*** (0.0001)	-0.0005*** (0.0001)	-0.0005*** (0.0001)	-0.0005*** (0.0001)
<b>Married</b>	0.017* (0.010)	0.016* (0.010)	0.016** (0.010)	0.018** (0.010)	0.015 (0.010)
<b>Number of Children:</b>					
<b>One</b>	-0.034*** (0.012)	-0.032*** (0.012)	-0.032** (0.012)	-0.030*** (0.012)	-0.032*** (0.012)
<b>Two</b>	-0.033 (0.012)	-0.030** (0.012)	-0.034*** (0.012)	-0.030*** (0.012)	-0.031*** (0.012)
<b>Three</b>	-0.058*** (0.018)	-0.055*** (0.018)	-0.061*** (0.018)	-0.054*** (0.018)	-0.056*** (0.018)
<b>Four or more</b>	-0.082*** (0.032)	-0.081*** (0.032)	-0.077** (0.032)	-0.072** (0.032)	-0.081*** (0.032)
<b>Visible Minority Status:</b>					
<b>Chinese</b>	0.018 (0.023)	0.039* (0.023)	0.073*** (0.023)	0.056** (0.023)	0.030 (0.024)
<b>Black</b>	-0.051** (0.022)	-0.056*** (0.022)	-0.067*** (0.022)	-0.052** (0.022)	-0.052** (0.022)
<b>South Asian</b>	-0.024 (0.025)	-0.019 (0.025)	0.018 (0.025)	-0.005 (0.025)	-0.019 (0.025)
<b>Filipino</b>	-0.116*** (0.033)	-0.123*** (0.033)	-0.090*** (0.032)	-0.077** (0.032)	-0.122*** (0.033)
<b>Latino</b>	-0.104** (0.052)	-0.080 (0.050)	-0.033 (0.052)	-0.077 (0.048)	-0.096* (0.051)
<b>Highest Degree Achieved in Canada (Dummy)</b>	0.168*** (0.018)	0.154*** (0.018)	0.118*** (0.018)	0.120*** (0.019)	0.162*** (0.018)
<b>Education Level:</b>					
<b>Master's or Ph.D.</b>	0.531*** (0.020)	0.527*** (0.020)	0.527*** (0.019)	0.523*** (0.020)	0.529*** (0.020)
<b>Bachelor's</b>	0.347*** (0.013)	0.345*** (0.013)	0.347*** (0.013)	0.344*** (0.013)	0.346*** (0.013)
<b>University Diploma</b>	0.135*** (0.012)	0.134*** (0.012)	0.136*** (0.012)	0.135*** (0.012)	0.135*** (0.012)
<b>Some University</b>	0.189*** (0.023)	0.187*** (0.023)	0.185*** (0.023)	0.184*** (0.023)	0.187*** (0.023)
<b>Some College</b>	0.073*** (0.018)	0.073*** (0.018)	0.075*** (0.018)	0.074*** (0.018)	0.072*** (0.018)
<b>Less than High School</b>	-0.095*** (0.017)	-0.089*** (0.017)	-0.087*** (0.017)	-0.088*** (0.017)	-0.091*** (0.017)
<b>Census Metropolitan Areas:</b>					
<b>Toronto</b>	0.209*** (0.014)	0.211*** (0.014)	0.217*** (0.014)	0.211*** (0.014)	0.205*** (0.014)
<b>Montreal</b>	0.077*** (0.016)	0.087*** (0.018)	0.103*** (0.018)	0.095*** (0.018)	0.093*** (0.018)
<b>Vancouver</b>	0.143*** (0.019)	0.144*** (0.019)	0.148*** (0.19)	0.145*** (0.019)	0.142*** (0.019)
<b>Other Areas</b>	0.105*** (0.011)	0.105*** (0.011)	0.108*** (0.011)	0.105*** (0.011)	0.103*** (0.011)
<b>N</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>	<b>6659</b>
<b>R<sup>2</sup></b>	<b>0.2467</b>	<b>0.2510</b>	<b>0.2574</b>	<b>0.2548</b>	<b>0.2477</b>

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
\*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.



**Table A3. Regression Results on Other Earnings Determinants for Married Men with Children**

	Only Common Earning Determinants	Spouse's Language	Children's Language
Age	0.011 (0.012)	0.013 (0.012)	0.012 (0.012)
Age <sup>2</sup>	-0.00004 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)
<b>Number of Children:</b>			
One	-0.050*** (0.016)	-0.049*** (0.016)	-0.049*** (0.016)
Three	0.002 (0.016)	0.003 (0.016)	0.005 (0.016)
Four or more	0.023 (0.028)	0.030 (0.027)	0.026 (0.028)
<b>Visible Minority Status:</b>			
Chinese	-0.159*** (0.036)	-0.105*** (0.036)	-0.093** (0.037)
Black	-0.202*** (0.048)	-0.215*** (0.048)	-0.209*** (0.047)
South Asian	-0.081** (0.034)	-0.037 (0.034)	-0.035 (0.033)
Filipino	-0.253*** (0.063)	-0.233*** (0.061)	-0.276*** (0.063)
Latino	-0.216*** (0.063)	-0.159** (0.067)	-0.192*** (0.064)
<b>Highest Degree Achieved in Canada (Dummy)</b>	0.160*** (0.023)	0.118*** (0.023)	0.114*** (0.024)
<b>Education Level:</b>			
Master's or Ph.D.	0.316*** (0.024)	0.305*** (0.023)	0.311*** (0.023)
Bachelor's	0.264*** (0.018)	0.263*** (0.018)	0.263*** (0.018)
University Diploma	0.130*** (0.018)	0.128*** (0.018)	0.126*** (0.018)
Some University	0.172*** (0.033)	0.168*** (0.033)	0.170*** (0.032)
Some College	0.066** (0.030)	0.063** (0.030)	0.067** (0.030)
Less than High School	-0.080*** (0.024)	-0.073*** (0.024)	-0.073*** (0.023)
<b>Census Metropolitan Areas:</b>			
Toronto	0.116*** (0.018)	0.119*** (0.019)	0.114*** (0.019)
Montreal	-0.022 (0.026)	0.011 (0.027)	0.018 (0.027)
Vancouver	0.044 (0.027)	0.043 (0.027)	0.046** (0.027)
Other Areas	0.045*** (0.016)	0.043*** (0.016)	0.043*** (0.016)
<b>N</b>	<b>3481</b>	<b>3481</b>	<b>3481</b>
<b>R<sup>2</sup></b>	<b>0.1930</b>	<b>0.2090</b>	<b>0.2108</b>

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
\*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.

**Table A4. Regression Results on Other Earnings Determinants for Married Women with Children**

	Only Common Earning Determinants	Spouse's Language	Children's Language
Age	0.038*** (0.012)	0.038*** (0.012)	0.036*** (0.012)
Age <sup>2</sup>	-0.0004*** (0.0001)	-0.0004*** (0.0001)	-0.0004*** (0.0001)
<b>Number of Children:</b>			
One	-0.013 (0.017)	-0.013 (0.017)	-0.010 (0.017)
Three	-0.025 (0.020)	-0.024 (0.020)	-0.024 (0.020)
Four or more	-0.093*** (0.036)	-0.091*** (0.035)	-0.088** (0.035)
<b>Visible Minority Status:</b>			
Chinese	0.047 (0.037)	0.067* (0.037)	0.076** (0.037)
Black	-0.039 (0.037)	-0.048 (0.037)	-0.056* (0.037)
South Asian	-0.020 (0.039)	-0.010 (0.040)	0.003 (0.040)
Filipino	-0.028 (0.054)	-0.011 (0.053)	-0.049 (0.053)
Latino	-0.099 (0.075)	-0.083 (0.073)	-0.066 (0.079)
Highest Degree Achieved in Canada (Dummy)	0.204*** (0.027)	0.189*** (0.028)	0.172*** (0.028)
<b>Education Level:</b>			
Master's or Ph.D.	0.547*** (0.031)	0.540*** (0.031)	0.542*** (0.031)
Bachelor's	0.335*** (0.021)	0.330*** (0.021)	0.332*** (0.021)
University Diploma	0.133*** (0.020)	0.129*** (0.020)	0.132*** (0.020)
Some University	0.160*** (0.038)	0.156*** (0.038)	0.016*** (0.038)
Some College	0.082*** (0.029)	0.082*** (0.029)	0.082*** (0.028)
Less than High School	-0.103*** (0.025)	-0.010*** (0.025)	-0.098*** (0.025)
<b>Census Metropolitan Areas:</b>			
Toronto	0.165*** (0.023)	0.175*** (0.023)	0.173*** (0.023)
Montreal	0.072** (0.029)	0.077** (0.030)	0.068** (0.031)
Vancouver	0.091*** (0.030)	0.096*** (0.030)	0.103*** (0.030)
Other Areas	0.079*** (0.018)	0.081*** (0.018)	0.083*** (0.018)
N	2629	2629	2629
R <sup>2</sup>	0.2387	0.2425	0.2443

Note: 1. Standard errors are in parentheses. 2. \*significance at 10% confidence level  
 \*\*significance at 5% confidence level \*\*\*significance at 1% confidence level.