

**The Performance of immigrants from India and the Philippines in the
Toronto and Vancouver Labour Markets**

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Abstract

India and Philippines are now the two major sources of immigration to Canada. This paper uses 2006 Census microdata on male and female immigrants from India and the Philippines to examine their performance in the Toronto and Vancouver labour markets. This is done in terms of the earnings disadvantages when these individuals arrive in Canada and of the speed at which they catch up with the native-born. In order to compare the performance of immigrants of these two groups in the labour market with Canadian born individuals, two models are set up: one that assumes the same assimilation rate for all groups, and the other that allows for different assimilation rates. The final results suggest that Indian and Filipino immigrants have difficulty to assimilate into the labour market in Toronto and Vancouver. In general, women seem to assimilate into the market better than men, and Filipino immigrants have a better performance than Indian immigrants in terms of integrating into the labour market.

1 Introduction

Globalization is a significant characteristic of the contemporary world, and immigration is one of the most symbolically important part of globalization. The remarkably large immigrant population with increasingly various cultural profiles has profound influence on the Canadian economy and on the society in general. For various historical reasons, Canadian immigration distribution among countries of origin gradually changed over time. In the 1960s, the majority of immigrants were from Europe, such as Britain, France and Germany. However, after 30 years, most immigrants come from Asia, such as China, Hong Kong, India and Pakistan (Citizenship and Immigration, 2014).

According to the 2011 National Household Survey, the population of immigrants in Canada was 6,452,300 and the total population was 33,476,700, which means that one in five Canadian residents were born outside Canada, the highest proportion since 1931. In the period between 2001 and 2006, more than 1.1 million immigrants arrived in Canada, and three fifth of them were born in Asia. By 2006, the immigrant population from Asia and the Middle East (40.8%) surpassed for the first time the immigrant population from Europe (36.8%). In 1971, 61.6% of the immigrant population was from Europe (Statistics Canada, 2014). Now, China, Philippines and India are the major countries providing immigrants to Canada (Citizenship and immigration, 2014).

The extent to which immigrants can successfully assimilate into the Canadian labour market has aroused the interest of researchers. To study the integration of immigrants, earnings are the most important variable. According to the 2006 Census, male immigrants' weekly earnings were over 50% lower than the earnings of native-born workers with the same level of education and experience. For female immigrants, they were approximately 44% lower (Statistics Canada,

2014). Back to 1995, average earnings were \$48,800 constant dollars per year for the Canadian-born and \$40,390 for the immigrant population. The gap between them was obviously smaller than in 2005 (Statistics Canada, 2014). In just ten years, the situation has entirely changed. As there are so many areas that the immigrants can choose to settle down, this paper mainly focuses on two metropolis- Toronto and Vancouver- to research the earnings of immigrants from two important source countries in the 21th century, India and the Philippines which are the number one and number two input immigrant countries in 2010.

This paper has a total of six parts. After this introduction, the second part is a brief retrospect of the history of immigration from those two countries. The following part reviews the literature about the economic performance of immigrants. The fourth part presents the data set and introduces the basic models. The fifth part shows the empirical strategy which estimates entry effects and assimilation effects for Indian and Filipino immigrants in Toronto and Vancouver. It also contains the interpretation of the empirical results. The last part is the conclusion of the entire paper.

2 Background on Immigration from India and the Philippines

2.1 Indian Immigrants

Indian immigration in Canada has a long history. It can be traced back to the beginning of the 20th century. The first record of Indian immigration was from Official Canada in 1904 (Johnston, 1984). At that time over a thousand immigrants mostly from Punjab entered Canada, the majority of them settled in Vancouver. At first, Indians were welcomed and they did mostly manual work, such as in the railway construction, connecting the public utilities in the municipalities, working in the shingle mills, and so on. Discrimination was not present, or there

was only a little of it. However, as they were hardworking and willing to work for comparatively low wages, the Indians soon became a threat to the Canadians who required higher standards of living and could not bear low wages. The prosperous community of Indians gradually became an abominated group by the local people. Not only were they excluded due to the reason that was mentioned above, but also because of their behaviour and their appearance. The weird clothing (turbaned), looks (bearded), and the peculiar behaviour and culture, prevented them from integrating into the Canadian society. Racial discrimination arose soon in British Columbia. The resentment came from several sources, like the fellow workers and the employers who were working together with them (Johnston, 1984). In 1908, which is the peak year of Indian immigration during that period, the total number that was allowed to enter Canada was 3,623. In 1909, this number was reduced to 9 (Chandrasekhar, S. 1944). Because the attitude of the Canadian population to Indian immigration was radical, the resentment did not disappear even if they were willing to pay the poll tax. The representative of the W.L. Mackenzie King government deputy minister of labour went to England to consult with the Indian officers who were at the London office to devise the means to prevent immigration of Indians (Chandrasekhar, 1944).

After the Second World War, India became an independent country and a member of the British Commonwealth. Meanwhile, the expanding economy in Canada led to relaxing the immigration restrictions. In spite of that, discrimination still existed during the 1950s as demonstrated by the 1953 Immigration Act that allowed the government to put barriers the entry of immigrants for reasons such as ethnicity, nationality and mode of life (Stelcner, 2000). Specifically, European immigrants were remarkably welcomed by Canada (Harrison, 1996).

However, when the Canadian Government realized that it became more and more difficult to attract European immigrants, the Immigration Act was profoundly reformed. As the non-discriminatory policy in 1962 created a shift to universal immigration, some problems like the skill level of the new arrivals appeared. In order to solve these problems, the Point system was created in 1967 (Beach, Green, and Worswick, 2007). This system emphasized education, training, age, occupation, knowledge of French or English, and other skills that benefit the development of Canada. The Point system was designed for individuals, but for the families, refugees and other groups, the requirements were relatively looser; provided they passed the basic criminal, security and health checks, they could enter Canada. From the first Indian immigrants landing in Canada up to 1976, about 118,000 Indian immigrants were allowed to land in Canada (Kurian, 1991). The reason of that is the Immigration Act of 1976 that emphasised family reunification and non-discrimination. The number of immigrants increased quickly (Kurian, 1991). Walton Roberts (2009) observed that although there was a decrease after 1980 in the number of immigrants in the family class who had a relationship with citizens or permanent of residents of Canada, the number began to increase from 1985 and reached a peak in 1993; the number of family class immigrants was always higher than the number of individual economic immigrants until 2003.

2.2 Filipino Immigrants

Filipino presence in Canada does not have as long a history as the Indian one. Until the late 20th century, the population of Filipinos living in Canada was very small. The first Filipinos arrived in Canada around 1930, but only 10 Filipinos were recorded in Manitoba in 1950 (Wikipedia, 2010). Not until 1967 did the Philippians appear in the Immigration Statistics, with 2994 recorded immigrants (Immigration Statistics, 1967). Before that, this group was included in

the general Asian category. Starting in 1967, immigration from the Philippines showed a considerable growth. The immigration from the Philippines reached a peak in 1974, with 9564 immigrants (Immigration Statistics, 1974), and then immigration declined as the regulations varied in the mid-1970s. The family reunification applications were limited by the government of Canada because they imposed restrictions on the definition of family. As we mentioned above, in 1967, Canada introduced the Point System for selecting immigrants, but points could be deducted if immigrants could provide pre-arranged employment. After 1967 immigration from the Philippines and from other developing countries followed an increasing trend (Gardiner Barber, 2008).

A new trend of immigration from the Philippines began in the 1980s, at which time women instead of men became the dominant stream in immigration. Canada introduced the 'Foreign Domestic Movement' (FDM) program in 1980, which was re-named 'Live-in Caregiver Program' (LCP) in 1992 (Bakan and Stasiulis, 1994). The FDM/LCP was designed to recruit migrant workers to serve as live-in domestics and nannies for Canadian families as a part of Canada's temporary foreign worker stream. However, as the caregivers were allowed to apply for permanent residence to become citizen, it is not surprising to see a shift in gender during those years. From the Immigration Database (IMDB) 2008 Immigration Category Profiles, the number of LCP landings increased fivefold from 3,011 in 1993 to 13,909 in 2010. During that period, the proportion of LCP landings reached 2% of total immigrant landings. Another representation was offered by Kelly (2006): from 1980-2001, live-in caregivers were 32,474, of which there were 25,846 Filipino immigrants. The individual-level data from the 1991 Canadian census sufficiently demonstrate that the number of female immigrants from the Philippines exceeded the number of males. Antecol, Cobb-Clark and Trejo (2002) observe that the Filipinos constitute 4.0

percent of male immigrants and 7.1 percent of female immigrants in Canada. 2001 data show that 57% of the Filipino communities were females comparing with 51% for all Canadians.

2.3 Immigration numbers for Indians and Filipinos

Table 1 shows the proportions of Filipinos and Indians in Toronto and Vancouver based on the public use microdata of the 2006 census which represent 2.7% of the Canadian population. These two metropolitan areas have 2,953 Filipinos in my data sample, 2,069 of which being in Toronto (1,200 females and 869 males) and 884 living in Vancouver (523 females and 361 males).

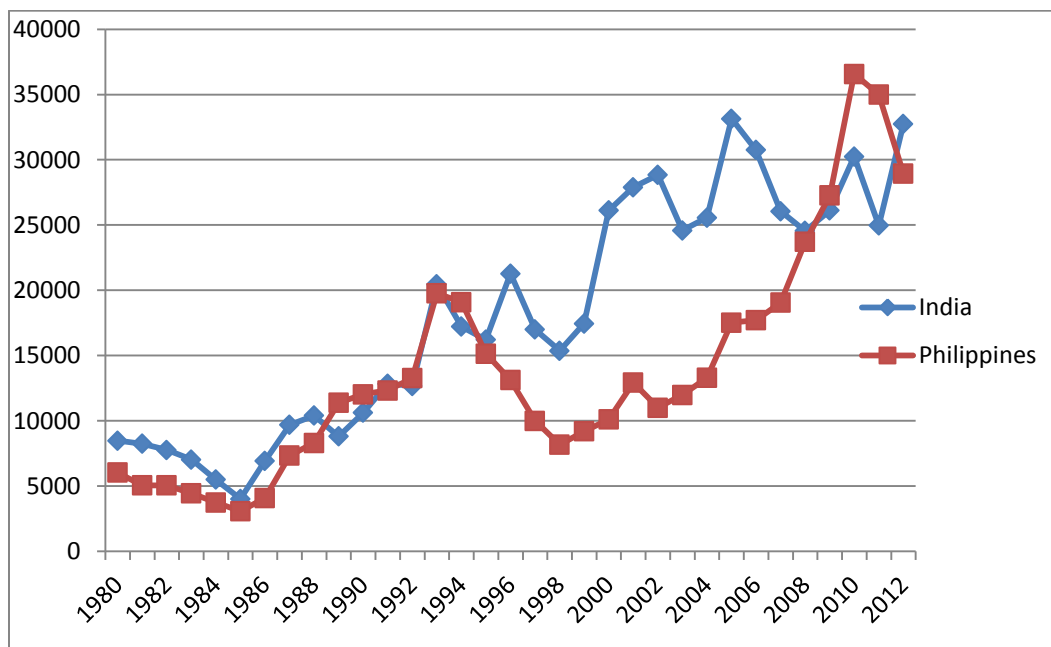
Table 1 Distribution of the population in Vancouver and Toronto, 2006

	Total	Toronto		Vancouver	
		Female	Male	Female	Male
Canadian-born	38623	13089	12611	6397	6526
%	50.41	47.55	47.00	57.22	58.91
Filipino	2953	1200	869	523	361
%	3.85	4.36	3.24	4.68	3.26
Indian	4141	1412	1502	621	610
%	5.40	5.13	5.60	5.55	5.51
Other immigrants	30902	11828	11854	3639	3581
%	40.33	42.97	44.18	32.55	32.33
Total	76619	27527	26834	11180	11078
%	100	35.93	35.02	14.59	14.46

Figure 1 shows the immigration trends for both countries since 1980. In 1993, Filipino immigration reached a peak and it then declined. As noted by Kelly (2006), the decline between 1993 and 1998 is likely due to the decrease in sponsored family members while the numbers in

other categories of immigration remained stable. After 1998, there were a continuously increasing number of Filipino immigrants that lasted until 2008. Since 2008, the number of immigrants from the Philippines has shown a sharp decrease. Before 1996, the situation of Indian immigrants was very similar to that of the Filipino immigrants. The lines of these two countries almost coincide with each other. After 1996, the trend in Indian immigration continues to increase, which differs from that of Filipino immigrants. From 1996 to 2008, the number of Indian immigrants always exceeds the number of immigrants from the Philippines. From 2008 to 2011, Filipino immigration overlaps Indian immigration. In 2011, Filipino immigration overlaps Indian immigration. From 2008 to 2011, Filipino immigration overlaps Indian immigration.

Figure 1 Number of immigrants to Canada from India and the Philippines, 1980-2012



Source: For 1980 to 1996: Citizenship and Immigration statistics archives (1966 to 1996) – Country of Last Permanent Residence by Year of Landing; for 1998 to 2012: Facts and figures– Immigration overview: Permanent and temporary residents

3 Literature review

A number of studies have been done on the economic impact of immigration. New immigrants have lower incomes than Canadian-born individuals. Some research has shown that the increase in poverty within the group of immigrants was responsible for all of the escalation in the overall low-income rate during the past twenty years in Canada (Picot and Hou, 2003). In fact, new Canadians have generally higher levels of education than Canadian-born individuals, but the income that they get is lower than that of their native-born peers and they also have fewer opportunities to get jobs. In 2005, the population of immigrants who were working full time earned about \$45,000 on average, but the immigrants who arrived around 2001 had average earnings of only \$28,700. In 1981 the unemployment rate for Canadian-born and immigrants were very similar, both a little under 8 per cent, but in 2006, the rate for immigrants is 6.9 per cent while the rate for native Canadians is 6.4 per cent (Census data reported by CBC, 2011). The phenomenon suggests that it is harder for immigrants than for native born Canadians to enter the labour market and to catch up with the income of Canadian-born individuals to new arrival immigrants.

A number of studies have focused on the assimilation and entry effects. Chiswick (1978) is the pioneer in the study of the performance of immigrants in the U.S. labour market. His research has initiated a series of other researches based on his original model of cross-sectional evidence of economic assimilation. Another eminent researcher is Borjas (1985) who improved the empirical methodology by pooling U.S. 1970 and 1980 Censuses data to distinguish between the assimilation effect, entry effect and cohort effect.

In Canada, Baker and Benjamin (1994) used pooled 1971, 1981 and 1986 Canadian census data to examine the earnings of immigrants. The entry effect became larger as time passed by while the rates of assimilation were fairly small. They found that immigrants' earnings were

twenty per cent lower than those of previous immigrants and they assimilated at a very modest pace in their first year of arriving.

Bloom, Grenier and Gunderson (1995) employed the same data as Baker and Benjamin (1994). They based their paper on the one by Bloom and Gunderson (1991) by adding the data from the 1986 census, and their analysis is similar to what was done by Baker and Benjamin. Borrowing the model of immigrants' earnings equation developed by Chiswick (1978) and adding the cohort-specific effects emphasized by Borjas (1985), they explain the logarithm of earnings with human capital variables (education, working experience, marital status, labour market activities) and immigration variables; the latter include a dummy variables to distinguish immigrants and native-born individuals in order to measure the "entry effect" and the number of years since migration for immigrants that is used to calculate the "assimilation effect". And another dummy variable is the cohort variable, which reflects immigrants' year of entry into Canada. Bloom, Grenier and Gunderson (1995) found a negative entry effect and a positive assimilation effect. At the same time, they observed that it is much harder to assimilate into the Canadian labour market for recent immigrants than for older immigrants. In their research, only fifteen years were needed to complete assimilation for immigrants who arrived prior to 1965. However, it was hardly possible to assimilate completely for immigrants who arrived after the 1970s.

The labour market opportunities are different among various groups of immigrants. As the number of immigrants increased rapidly, visible minorities have drawn much attention. Christofides and Swidinsky (1994) carried out a research on wage determination by gender and visible minority using the data from the 1989 Labour Market Activity Survey (LMAS). They found that visible minority women and men, and white women, are the groups having most

difficulties in the Canadian labour market. Among those three groups, the situation of the visible minority female group is especially acute. The authors find that the average wage offer of white males is 45.8 per cent higher than that of minority females, that the minority males' wage offer is 13.4 per cent higher than that of the minority females and that white females' wage offer is 9.4 per cent higher than that of the minority females.

Pendakur and Pendakur (1998) study a similar topic with data from the 1991 Census Public Use Microdata File (PUMF). They look at earnings differences between whites and various visible-minority groups. For immigrants, the level of education and the place where they received their education have important influence on the earnings gaps that they face. However, even if the level of education is controlled for, there is still an earnings gap between the native Canadian white individuals and visible minority immigrants. Furthermore, the earnings gaps related to ethnicity are different across Canada's three largest CMAs. Specifically, males in Montreal and in Toronto face earnings gaps of 16.7 per cent and 8.9 per cent respectively, while the gap is only 3.6 per cent in Vancouver. Visible minority women face earnings gaps of 19.6 per cent in Montreal and of 5.9 per cent gap in Toronto, while there is no gap in Vancouver.

More recently, Frenette and Morissette (2005) employed Census data from 1980 to 2000 to study the factors that lead contemporary immigrants to reach equality of earnings with Canadian-born workers. They used the framework put forward by Baker and Benjamin (1994) and Grant (1999) to inspect the convergence in earnings of native-born and immigrant workers. Their results indicate that recent immigrants can only partially offset their relative earnings disadvantages at entry by improving earnings over time. In addition, the results suggest that the declining labour outcomes of new labour market entrants could be the cause of the bad performance of male immigrants.

Schaafsma and Sweetman (2001) emphasised the link between age at immigration and earnings; this is the first detailed study on that topic with Canadian data. They found that work experience in the source country did not much help in the host country and that those who migrated at a higher age had low returns to foreign labour market experience and to foreign education than those who migrated at a young age.

Aydemir and Skuterud (2005) used the 1981, 1986, 1991, 1996 and 2001 Canadian Censuses to explore the reasons of the deterioration in entry earnings of cohort of immigrant females and males. Their main finding is that the declining returns to foreign labour market experience can explain about one-quarter to one-half of the whole deterioration in the entry earnings of immigrants of both genders, especially the immigrants from non-traditional source countries. From the data of the 1990s, they find that one-third of the deterioration can be explained by the shifts in the language ability and the shift away from traditional countries to non-traditional countries. However, there is no evidence relative to the declining returns to foreign education for both genders.

There are also a few studies on the earnings of particular groups of immigrants. Li and Dong (2007) used data from the 2001 Census to study the participation of Chinese immigrants in the enclave economy based on the language used most often at work. The paper mainly investigates wages of immigrant workers and entrepreneurs who are in the enclave economy compared with their counterparts in the mainstream economy. In the findings indicate that Chinese immigrant workers who receive wages or are self-employed in the mainstream economy earn more than their counterparts in the enclave economy. Most Chinese immigrants in the enclave economy earn low wage jobs within a limited number of service industries.

Grande and Kerr (1998) examined the case of Filipinos who work in Canada, focusing on domestic workers in 1996. The research was conducted by a committee which included the Women's Advisory Committee of the Philippines-Canada Human Resource Development Program (PCHRD), the Coalition for the Defence of Migrant Workers' Rights in Toronto, and PINAY which is the Filipino Women's Organization in Quebec. The group of researchers found that the cost of paying the recruitment agencies fee for finding a job in Canada was \$8,300 CAD, but that the earnings were relatively low. And even after working for a long time, the income was just not enough to meet the requirements of a basic life style.

Liang (2012) used the public use microdata file of the 2006 Canadian census to study the labour market of recent immigrants from Mainland China and Hong Kong in Toronto and Western Canada. Based on the empirical methodology and the theoretical framework of Bloom, Grenier and Gunderson (1995), Liang set regression models which inspect entry and assimilation effects. She analyzed models with the same assimilation rate and models with the different assimilation rates for men and women. Then she reached the conclusion that, for men, Hong Kong immigrants perform better than Mainland China immigrants, no matter whether they face the same assimilation rate or different assimilation rates; female immigrants in both areas perform better than the male immigrants. All Mainland China and Hong Kong immigrants need a smaller number of years to catch up with the native Canadian when they have different assimilation rates than when they have the same assimilation rate.

From all those papers, we can find that immigrants do not perform very well in the Canadian labour market. There is a large earnings gap between immigrants and native Canadian and it becomes harder to enter the labour market in Canada. To be able to catch up with the incomes of Canadian-born individuals, more and more years are needed for the immigrants. In this paper I

use the 2006 census, and with a similar methodology to Liang (2012), I am going to examine the performance of Indian and Filipino immigrants in the Canadian labour market.

4 Empirical Framework: Data and Model

4.1 Data and Variables

According to the Canadian 2006 Census, 42.8 % of Filipino immigrants chose to live in Toronto and 20.4% of them lived in Vancouver. Among the other metropolitan areas, 6.35% of Filipino immigrants lived in Montreal and 1.75% in Ottawa- Gatineau. There are 21% of Indians who decided to settle in Vancouver, while the proportion living in Toronto is approximately 49%. Montreal is the place of residence of 3.7% of Indian immigrants, while 1.8% of Indian immigrants live in Ottawa-Gatineau.

My study sample includes individuals from Toronto and Vancouver. I focus on the earnings of Filipino and Indian immigrants in those two large Canadian cities. For purposes of comparison, immigrants from other parts of the world (Africa, rest of Asia, America, and Europe) are also taken into consideration. The population under study includes males and females whose ages are between 25 and 64 since these ages are the primary labour ages.

Since the 2006 Census codebook gives ages in five-year groups, I set the variable age as the midpoint of each age group. The earnings are defined as the sum of wages and salaries and self-employment income received in 2005 in the range from \$500 to \$200,000. The very large and very small earnings are considered as outliers and excluded. Individuals whose year of immigration is 2005 or 2006 are also dropped since their wages and salary income in 2005 were not received in Canada.

Earnings are affected by human capital such as education, working experience and other individual characteristics like gender, marital status. In the 2006 census codebook, education is provided in terms of the highest certificate, diploma or degree. To convert into the years of schooling, I create the variable *educ*, the details of which are shown in Appendix.

Working experience also affects earnings, but to identify an individual's work history is not feasible. For this reason, I use Mincer's identity which is age minus years of schooling minus six to express the potential working experience and define the variable *exp*. Also, experience square is included.

Linguistic skills are a significant component of human capital of migrant workers. Speaking the dominant language of the host country can raise the opportunity to get a job with good wages. Here the language variable is the knowledge of one or both of the official languages. The variable *language* is equal to unity if the person speaks English, French, or both English and French, and equal to zero otherwise.

As mentioned above, personal characteristics are considered to affect individual earnings. Marital status could have an effect on earnings, especially for females, so the variable *married* is set as a dummy variable equal to one if the individual is legal marital status, and equal to zero otherwise.

The number of weeks worked in one year and the number of hours in the reference week could still influence the earnings of individuals. So I reorganized the weeks worked in 2005 and the hours worked for pay or in self-employment into groups of dummy variables.

The number of years since migration is usually regarded as a common factor that is used to analyze immigrant behaviour. In order to calculate it, it is necessary to drop the immigrants who

were admitted to enter Canada in 2005 and 2006 as the information on their wages does not represent accurately their situation in Canada. The number of years since migration is calculated as 2006 minus the year during which a person became a landed immigrant.

4.2 Models

Bloom, Grenier and Gunderson (1995) used pooled data to study cohort effects, but I cannot do it in this paper as the only data being used is 2006 Canadian census.

Here I am borrowing the regression models of Liang (2012), with dummy variables for source countries. Model (1) is specified as follows:

$$y = X\beta + \alpha_1 \text{India} + \alpha_2 \text{Philippines} + \alpha_3 \text{Asia} + \alpha_4 \text{EuropeUs} + \alpha_5 \text{AfricaSA} + \delta \text{ysm} \quad (1)$$

where,

y = natural logarithm of earnings

X = vector of standard human capital determinants of earnings that includes education, working experience, experience squared, marital status, weeks worked in previous years, hours worked for pay or in self-employment in previous week, and language. The definitions are given in Appendix A1.

India, Philippines, Asia, EuropeUs, AfricaSA are dummy variables for place of birth, with place of birth in Canada as the reference group. India and Philippines represent the immigrants from the two countries of interest. Asia is defined here to include the rest of Asia as well as Oceania; that is, West Central Asia and the Middle East, Mainland China, Hong Kong, other Eastern Asia, Other Southeast Asia, Pakistan, Other Southern Asia, Oceania and others. EuropeUs consists of the United States of America, the United Kingdom, Germany, Other

Northern and Western Europe, Poland, Other Eastern Europe, Italy, Portugal and Other Southern Europe. The AfricaSA variable identifies immigrants from Central America, Jamaica, Other Caribbean and Bermuda, South America, Eastern Africa, Northern Africa, and Other Africa.

The parameter α_i is the entry effect which is defined as the simple gap in earnings between immigrants and Canadian-born individuals at the time of arrival of the immigrants (Bloom, Grenier and Gunderson, 1995).

The parameter δ is the assimilation effect which is “the average percentage change in immigrants’ earnings for each year spent in Canada, over and above any increases associated with other labour market characteristics (such as experience) that both immigrants and Canadian-born individuals enjoy” (Bloom, Grenier and Gunderson, 1995, page 991) .

The variable ysm represents the number of years since migration and it is assumed in model (1) that the assimilation rate is the same for all five groups. However, since different groups have various characteristics and cannot be expected to have the precisely identical assimilation effect, model (2) allows for different assimilation rates for each group:

$$y = X\beta + \alpha_1 \text{India} + \alpha_2 \text{Philippines} + \alpha_3 \text{Asia} + \alpha_4 \text{EuropeUs} + \alpha_5 \text{AfricaSA} + \delta_1 \text{ysmIndia} + \delta_2 \text{ysmPhilippines} + \delta_3 \text{ysmAsia} + \delta_4 \text{ysmEuropeUs} + \delta_5 \text{ysmAfricaSA} \quad (2)$$

where,

ysmIndia= years since migration for Indian immigrants = ysm×India

ysmPhilippines= years since migration for Filipino immigrants = ysm×Philippines

ysmAsia= years since migration for Asia, Oceania and Others excluding India and Philippines
 = ysm×AsiaOc excluding India and Philippines

ysmEuropeUs= years since migration for European, United State = ysm×EuropeUs

ysmAfricaSA= years since migration for Central America, Jamaica, Other Caribbean and Bermuda, South America, Eastern Africa, Northern Africa, Other Africa = ysm×AfricaSA

In both models, the expectation for the entry effects is $\alpha_i < 0$. This difference is assumed to be negative because the new immigrants may have difficulties related to language, social networks, lack of information about the labour market or possible discrimination by the employers, that affect their wages negatively; δ in model (1) and δ_i in model (2) are expected to be positive, which indicates that immigrants integrate into the labour market as the initial difficulties are removed and as they acquire the necessary skills.

The number of years required for the positive assimilation effect to compensate the negative entry effect can be estimated and represents the amount of time for immigrants' earnings to overtake the earnings of otherwise comparable Canadian-born individuals. As the cohort effect is omitted, the expression is $-\alpha_i/\delta$ for model (1) and $-\alpha_i/\delta_i$ for model (2).

4.3 Descriptive statistics

To compare the differences in human capitals among Indian immigrants, Filipino immigrants and Canadian-born individuals, two tables are presented. The average values for these three groups in Toronto are displayed in Table 2, while Table 3 shows the same for Vancouver.

The average ages of my samples for those three groups in both cities are from 40 to 43 years. In Toronto, the Canadian-born individuals' mean ages for both females and males are around 40

year-old. But the ages of Filipino female and male immigrants are 43. In Vancouver, the three groups' average ages are much closer, at around 42 years.

There is a gap in average wages between the Indian and Filipino immigrants and the Canadian-born individuals in Toronto and Vancouver for both males and females. In Table 2, the average wage of Filipino female immigrants in Toronto is about \$33,700, and Indian immigrants' earned on average \$27,800 in 2005. Native-born females have a higher average wage of \$42,500. The gap between Canadian-born females and Indian female immigrants is more than \$14,000. And between Filipino and Indian female immigrants, the average wages have a difference of about \$4,500. A similar situation is observed among these three groups for males in Toronto. The Canadian-born individuals' average wage is \$56,600, which is higher than that of Filipino immigrants by about \$14,000 CAD and of Indian immigrants by about \$15,000 CAD. We note that the difference between the two male immigrants' groups is much smaller than between the female groups.

In Table 3, a similar pattern is observed in Vancouver. The mean wages of female Filipino and Indian immigrants are \$30,900 and \$21,300 respectively, which are lower than those of the native wages as well. There is also a difference between the two female immigrant groups in that the mean earnings of Indian immigrants are lower than those of Filipino immigrants.

In terms of years of schooling, it can be seen in Table 2 that the Filipino female immigrants have the highest average education. In general, the native-born female received the lowest education among the three groups. The Indian immigrant females and males in Vancouver have 12.5 and 12.9 years of schooling respectively. The level of education for native-born male individuals in Vancouver is between the other two groups.

Variables	Women			Men		
	Canadian-born	India	Philippines	Canadian-born	India	Philippines
wages	42473 (27129)	27839 (20787)	33687 (20946)	56603 (35957)	41787 (27372)	42094 (22561)
age	40.8 (10.2)	40.8 (10.1)	43.4 (9.8)	40.6 (10.3)	43.2 (9.9)	43.3 (10.3)
educ	14.12 (2.457)	14.36 (3.050)	14.80 (2.094)	13.78 (2.679)	14.62 (2.970)	14.50 (1.992)
exp	20.65 (10.88)	20.50 (10.75)	22.58 (10.01)	20.84 (10.70)	22.55 (11.19)	22.83 (9.77)
expsq	544.71 (495.742)	535.72 (502.055)	609.89 (476.282)	548.68 (500.645)	633.59 (559.84)	616.30 (467.77)
married	0.520	0.883	0.624	0.518	0.883	0.785
ysm		13.408 (10.162)	14.738 (8.842)		13.186 (10.209)	15.123 (9.311)
language	0.999	0.955	0.998	0.999	0.970	1
wks0113	0.038	0.060	0.033	0.019	0.027	0.023
wks1426	0.061	0.092	0.069	0.040	0.040	0.050
wks2739	0.052	0.068	0.042	0.041	0.051	0.033
wks4048	0.124	0.162	0.188	0.113	0.174	0.180
wks4952	0.693	0.532	0.592	0.634	0.411	0.530
hrs0119	0.053	0.037	0.052	0.017	0.0147	0.008
hrs2029	0.073	0.055	0.034	0.023	0.020	0.0138
hrs3034	0.050	0.036	0.039	0.023	0.013 (0.112)	0.024
hrs3539	0.165	0.126	0.148	0.092	0.084	0.112
hrs4044	0.324	0.405	0.403	0.283	0.343	0.381
hrs4549	0.067	0.049	0.048	0.094	0.070	0.058
N	13089	1410	1200	12611	1500	869

Table 3 Means and Standard Deviations of the Variables (in parentheses): **Vancouver**

Variables	Women			Men		
	Canadian-born	India	Philippines	Canadian-born	India	Philippines
wages	42473 (27129)	21283 (16762)	30882 (20070)	52009 (33465)	37567 (30131)	36870 (20010)
age	41.9 (10.3)	41.7 (10.0)	42.9 (9.3)	41.8 (9.9)	42.5 (10.1)	43.1 (10.2)
educ	13.84 (2.46)	12.45 (3.18)	12.45 (1.93)	13.55 (2.59)	12.94 (3.17)	14.41 (2.19)
exp	22.11 (10.88)	23.20 (11.43)	23.20 (9.06)	22.21 (10.82)	23.56 (11.27)	22.74 (10.12)
expsq	544.71 (495.74)	668.58 (602.72)	569.21 (422.33)	610.11 (517.25)	681.91 (581.23)	619.15 (493.49)
married	0.520 (0.500)	0.855 (0.352)	0.681 (0.467)	0.509 (0.500)	0.892 (0.311)	0.776 (0.418)
ysm		15.778 (9.951)	14.532 (9.969)		16.156 (10.841)	14.698 (9.793)
language	1	0.880	0.998	1	0.905	0.994
wks0113	0.040	0.048	0.034	0.025	0.020	0.055
wks1426	0.067	0.140	0.078	0.044	0.056	0.044
wks2739	0.064	0.108	0.055	0.049	0.080	0.053
wks4048	0.159	0.200	0.241	0.142	0.246	0.263
wks4952	0.766	0.648	0.659	0.719	0.537	0.533
hrs0119	0.071	0.042	0.040	0.023	0.013	0.019
hrs2029	0.095	0.079	0.071	0.030	0.016	0.030
hrs3034	0.067	0.043	0.063	0.030	0.013	0.019
hrs3539	0.160	0.084	0.163	0.091	0.052	0.091
hrs4044	0.390	0.475	0.529	0.398	0.435	0.543
hrs4549	0.055	0.048	0.029	0.084	0.077	0.061
N	6397	621	523	6526	610	361

For the marital status variable, the closer the mean to one, the larger the proportion of individuals is married. As a matter of fact, both female and male Canadian-born individuals in Toronto and Vancouver have a mean of 0.52 for the marital status variable. Indian immigrants, both women and men, have the highest mean value for marital status, at over 85 per cent. For Filipino immigrants, the mean values for male immigrants in both cities are much larger than those for females. In Toronto, only 62.4 per cent of the females are married, compared to 78.5 per cent for males. The situation is similar in Vancouver, with 68.1 per cent of the females being married as opposed to 77.6 per cent for males. As already noticed, there are more female than male immigrants from the Philippines, which explain the fact that many of those females are single. This situation reflects cultural differences among the groups. In Toronto, although Indian female immigrants have the largest proportion being married, there are still many women who work much more than the other two groups. And this situation also happened for the Indian female immigrants who are in Vancouver.

5 Empirical results and interpretations

The results of the regressions for the entry and assimilation effects are displayed in Tables 4 to 9. Table 4 and Table 5 summarize the result of the entry and assimilation effects for males using model (1) and model (2) respectively. Table 7 and Table 8 report the same effects for females using both models. The complete results of the regressions are all listed in the Appendix Tables A3 to A6.

5.1 The results of the regression of the first model for men

Based on model (1), in Table 4, with the assimilation rate constrained to be the same for all immigrants, the immigrants from different countries present various entry effects. The estimated

coefficients α_i for the entry effects are all negative, indicating lower earnings when the immigrants enter Canada. The assimilation effects are positive as expected.

In Toronto, Indian male immigrants have an average of about 53.7 percent earnings disadvantage when arriving in Canada compared with native-born male individuals. After arrival, their relative earnings go up at the common rate of 1.1 percent every year, so that it takes around 42.5 years to catch up with the Canadian-born. Similarly, 43.2 years would be needed for the Filipino immigrant males to have the similar earnings to the native-born men which almost the same with India male immigrants. From the result of F-test, Indian male immigrants have a significant difference with the Filipino male immigrants for the entry effect.

In Vancouver, Indian and Filipino immigrants respectively have a 61.8 percent and 47.8 percent earnings disadvantage at the time of arrival in Canada relative to the comparable native-born. The estimated assimilation rate for immigrants in Vancouver is 1.28 percent per year, so that the Indian male immigrants need 48.3 years to offset this inferior position while the Filipino male immigrants catch up in 37 years. Additionally, the F-test shows that the entry effect is significantly different between the Indian and Filipino groups. Comparing the two cities, the assimilation effect in Vancouver is superior to the one in Toronto, but due to the larger entry effect of Indian immigrants, the number of years needed to converge to the native-born men in Vancouver still exceeds the one in Toronto.

Table 4 also presents the results for immigrants from the rest of the world. In Toronto, the other three groups (AsiaOc, EuropeUs and AfricaSA) enjoy smaller earnings disadvantages at entry than Indian and Filipino immigrants; this is true especially for EuropeUs, with an entry

effect of only 34.2 percent. Since they have the same assimilation effect, they take fewer years to catch up.

Comparing with Toronto, male immigrant groups in Vancouver display a similar result. The group AsiaOc is estimated to take nearly 51.8 years to catch up with the earnings of comparable Canadian-born males, which is the longest among all the groups.

5.2 The results of the regression of the second model for men

In the second model, the various groups of immigrants are allowed to have different assimilation effects. The detailed regression is shown in Appendix Table A4. In this case even if a group of immigrants has a relative large earnings disadvantage compared to the other groups, a faster assimilation can offset that entry effect. In accordance with the expectations, negative entry effects and positive assimilation effects are still observed.

As Table 5 shows, the profiles for men with different assimilation effects now differ from the one with the same assimilation. For the immigrants in Toronto, compared to the Canadian-born males, Indian immigrants get a 55.5 percent earnings disadvantage at entry. Their earnings growth increases 1.22 percent per year and it will take 45.5 years on average to catch up with comparable Canadian-born men. The gap in the entry effect between Indian immigrants and Filipino immigrants is only 2.74 percent, but their catching-up year differs. The difference in assimilation between Indian and Filipino immigrants in Toronto is 0.22 per cent in favour of the Filipinos, which is large enough to make a difference. The number years for Filipino immigrants to catch up with the comparable Canadian-born men are 36.6. However, when we look at the F-test result for the equality of Indian and Philippines entry and assimilation effects, the result indicates that the gap of these effects are not significant.

Table 4 Entry and assimilation effects of Model (1) for men

Variables	Toronto	Implied years To equality	Vancouver	Implied years To equality
Entry effect- $\alpha \times 100$				
India	53.67 (-23.10)	42.51	61.76 (-15.68)	48.25
Philippines	47.57 (-16.49)	43.24	47.84 (-10.33)	37.38
AsiaOc	53.72 (-32.20)	40.26	66.35 (-23.41)	51.84
EuropeUs	34.18 (-15.50)	31.07	46.09 (-11.55)	36.01
AfricaSA	43.50 (-21.36)	39.54	48.56 (-9.10)	37.94
Test of equality of India and Philippines entry effect(F-test)	3.46		6.89	
Assimilation effect $\delta \times 100$				
Ysm	1.10 (17.55)		1.28 (12.03)	

NOTES:

Coefficients estimated from Model (1), $y = X\beta + \alpha_1 \text{India} + \alpha_2 \text{Philippines} + \alpha_3 \text{AsiaOc} + \alpha_4 \text{EuropeUs} + \alpha_5 \text{AfricaSA} + \delta \text{ysm}$.

Implied years to equality is calculated by $-\alpha_i/\delta$.

The figures in parentheses are the t-statistics.

The reference group is Canadian-born

Source: based on regression in Table A3

The result for immigrants from India settled in Vancouver in Table 5 indicates that, on average, a 59.2 percent earnings disadvantage is obtained when they first come into Canada. The entry effect for those from the Philippines is 54.3 percent. However, as the assimilation effect is smaller, with the time to catch up is 53.4 years for Indian immigrants. At the same time, to the Filipino male immigrants in Vancouver the entry effect is 54.28 and need only 31.74 years to catch up with the native born people in the labour market. The F-test shows that the difference between the entry effects and assimilation effects of these two groups are statistically significant.

Table 6 summarizes the results for the number of years to catch up in each of the two models. Using model (2), the gaps between the immigrants who are in Toronto and Vancouver are different between these two groups. Indian immigrants need more time to assimilate in Vancouver while Filipino immigrants need fewer years to achieve that goal in Toronto.

Table 5 and Table 6 also confirm the negative entry and positive assimilation effects in both Toronto and Vancouver for the AsiaOc, EuropeUs and AfricaSA groups. For the group AsiaOc, although the entry effect in Toronto is relatively high (67.4 percent earnings disadvantage) compared the other four groups; the number of catch-up years is the smallest one, at only 33 years. In contrast, the AfricaSA group has a comparatively small 37 percent earnings disadvantage at entry, but the immigrants in this group need 48 years to assimilate into the Toronto labour market. The speed of convergence is even slower than that of the Indian immigrants. Turning to the groups in Vancouver, a small entry effect with a tiny assimilation effect can generate a relatively large catch-up number of years; the best example is the EuropeUs group. Overall, among the five immigrant groups, three have a longer number of years to assimilation in Vancouver; those are the Indian, the AsiaOc and the EuropeUs immigrants.

Table 5 Entry and assimilation effects of Model (2) for men

Variables	Toronto	Implied years To equality	Vancouver	Implied years To equality
Entry effect- $\alpha \times 100$				
India	55.47 (-16.44)		59.23 (-9.79)	
Philippines	52.73 (-10.50)		54.28 (-7.11)	
AsiaOc	67.40 (-29.65)		77.89 (-21.64)	
EuropeUs	23.30 (-8.34)		27.84 (-5.23)	
AfricaSA	37.01 (-11.40)		48.38 (-5.36)	
Assimilation effect $\delta \times 100$				
ysmIndia	1.22 (6.22)	45.46	1.11 (3.70)	53.36
ysmPhilippines	1.44 (5.14)	36.62	1.71 (4.02)	31.74
ysmAsiaOc	2.04 (16.55)	33.04	1.97 (11.58)	39.54
ysmEuropeUs	0.70 (7.82)	33.29	0.63 (3.83)	44.20
ysmAfricaSA	0.77 (5.38)	48.06	1.27 (3.33)	38.09
Test of equality of Indian and Philippines Entry and Assimilation Effects(F-test)	1.80		4.26	

NOTES:

Coefficients estimated from Model (2), $y = X\beta + \alpha_1 \text{India} + \alpha_2 \text{Philippines} + \alpha_3 \text{AsiaOc} + \alpha_4 \text{EuropeUs} + \alpha_5 \text{AfricaSA} + \delta_1 \text{ysmIndia} + \delta_2 \text{ysmPhilippines} + \delta_3 \text{ysmAsiaOc} + \delta_4 \text{ysmEuropeUs} + \delta_5 \text{ysmAfricaSA}$

Implied years to equality is calculated by $-\alpha_i/\delta_i$.

The figures in parentheses are the t-statistics.

The reference group is Canadian-born

Source: based on regression in Table A4

Table 6 Summary of years to equality, men

	Toronto		Vancouver	
	Model (1)	Model(2)	Model (1)	Model (2)
India	42.51	45.46	48.25	53.36
Philippines	43.24	36.62	37.38	31.74
AsiaOc	40.26	33.04	51.84	39.54
EuropeUs	31.07	33.29	36.01	44.20
AfricaSA	39.54	48.06	37.94	38.09

5.3 The results of the regression of the first model for women

Checking the result for the female immigrants in both metropolitan areas, the picture is similar to that for men. The entry and assimilation effects for model (1) are shown in Table 7. The whole regression is presented in Appendix Table A4. Assuming the same assimilation rate, female immigrants in Vancouver and Toronto also exhibit the expected entry effects and assimilation effects mentioned above. The negative entry and positive assimilation effects are relatively larger for women than them for men in Toronto and in Vancouver. Most of the female immigrant groups in model (1) catch up faster with their Canadian-born counterpart male immigrant group.

In Toronto, the Indian immigrant females have, on average, a 63.8 percent earnings disadvantage and Filipino immigrants a 50.5 percent earnings disadvantage at entry. With a same assimilation rate of 1.55 percent annually, Indian immigrants will take 41 years to assimilate into the market and Filipino immigrants will take 32.5 years. Moreover, the F-test of the result indicates that the gap in the entry effect between Indian and Filipino female immigrants is statistically significant. Comparing with the results for men in Toronto for these two groups, the data for women show that even though a larger earnings disadvantage at entry

Table 7 Entry and assimilation effects of Model (1) for women

Variables	Toronto	Implied years To equality	Vancouver	Implied years To equality
Entry effect- $\alpha \times 100$				
India	63.77 (-26.07)	41.14	60.98 (-15.29)	42.94
Philippines	50.45 (19.64)	32.55	44.37 (-10.89)	31.24
AsiaOc	60.40 (-34.33)	38.96	59.54 (-21.09)	41.93
EuropeUs	54.84 (-24.48)	35.38	46.63 (-11.29)	32.84
AfricaSA	50.36 (-24.80)	32.49	47.85 (-9.17)	33.70
Test of equality of India and Philippines entry effect(F-test)	18.45		11.66	
Assimilation effect $\delta \times 100$				
ysm	1.55 (23.93)		1.42 (12.78)	

NOTES:

Coefficients estimated from Model (1), $y = X\beta + \alpha_1 \text{India} + \alpha_2 \text{Philippines} + \alpha_3 \text{AsiaOc} + \alpha_4 \text{EuropeUs} + \alpha_5 \text{AfricaSA} + \delta \text{ysm}$.

Implied years to equality is calculated by $-\alpha_i/\delta$.

The figures in parentheses are the t-statistics.

The reference group is Canadian-born

Source: based on regression in Table A5

exists, the number of years to convergence is smaller because of a faster assimilation rate.

In Vancouver, the Filipino female immigrants also have a superior performance than Indian female immigrants. Low wages at entry are still seen in the results, especially for Indian immigrants, with a gap of 61 percent.

There is a 16 percent entry earning gap between the Indian and Filipino groups. These two groups assimilate into the market at a same rate of 1.44, so that Indian immigrants need 43 years and Filipino immigrants use 31 years to converge to the Canadian-born individuals. The result of F-test also shows that there is a statistically significant difference in the entry effects between these two groups.

The performances of the other three female groups are also noteworthy. Unlike men, the EuropeUs female group is no longer the one that takes the shortest time to assimilate in both cities. AfricaSA and Filipino female groups perform better than EuropeUs group in Toronto and Vancouver, with 32 years and 31 years to catch up. The second and fourth columns indicates that under model (1), immigrant females have a relatively lower wage at arrival; however, due to a slightly higher assimilation rate for the women in Toronto than in Vancouver, the situation of these groups becomes fairly similar to that in Vancouver, with just a small gap between the same groups in the two cities. For example, Filipino females in Vancouver need 31 years to assimilate into the market while the counterpart in Toronto need 32 years in spite of a difference of entry effect of 6 percentage points.

5.4 The results of the regression of the second model for women

The results of model (2) are shown in Table 8 for the females, with the complete results shown in Appendix Table A6. They indicate a pattern of relatively higher entry wages for the

Indian immigrants in Toronto and Vancouver compared to the men. A 72 percent entry earnings disadvantage is not good news for the females who are in Toronto. Fortunately, a significant assimilation rate which is 2.18 percent per year offsets the drawback.

In contrast, the Filipino females in Toronto, although they have a relatively smaller entry gap than males, they still take much more time to catch up than males. Another situation happens in Vancouver, where the Indian immigrant females have a large gap at entry than which is similar to the one of males. However the number of the years of convergence to the native-born individual is around 10 years shorter than males due to the different assimilation rates. In the case of Filipino immigrants in Vancouver, since both entry effects and assimilation effects for the females are superior to those for males, the number of years that females need to assimilate into the market is 27 while for males it is 3 years longer. After checking the results of the F-test for the equality of Indian and Philippines entry and assimilation effects, we can see that the differences are statistically significant.

For the other immigrant groups, comparing with the results for males, the entry effects for AsiaOc, EuropeUs and AfricaSA in Toronto account for a larger proportion which are 73 per cent, 45.1 per cent and 46.4 per cent respectively. As the assimilation effects for each group are different, it takes various years for the earnings of each immigrant group to converge to those of the comparable Canadian-born individuals. From the table, the female immigrants from AsiaOc and AfricaSA need relatively fewer years than their male counterparts. However the situation in Vancouver differs. The AfricaSA group spends the longest time to catch up with the native-born, not only compared to the other female groups in Vancouver, but to in counterpart male group.

Table 8 Entry and assimilation effects of Model (2) for women

Variables	Toronto	Implied years To equality	Vancouver	Implied years To equality
Entry effect- $\alpha \times 100$				
India	72.22 (-19.97)		61.23 (-9.62)	
Philippines	44.20 (-9.93)		50.19 (-7.91)	
AsiaOc	72.98 (-32.20)		69.34 (-19.72)	
EuropeUs	45.16 (-15.84)		28.80 (-5.09)	
AfricaSA	46.43 (-14.73)		35.75 (-3.87)	
Assimilation effect $\delta \times 100$				
ysmIndia	2.18 (10.31)	33.13	1.43 (4.32)	42.82
ysmPhilippines	1.13 (4.40)	39.12	1.82 (5.15)	27.58
ysmAsiaOc	2.41 (18.00)	30.28	2.02 (11.82)	34.33
ysmEuropeUs	1.19 (12.88)	37.95	0.76 (4.24)	37.89
ysmAfricaSA	1.36 (10.14)	34.14	0.81 (2.05)	44.14
Test of equality of Indian and Philippines Entry and Assimilation Effects(F-test)	14.07		6.46	

NOTES:

Coefficients estimated from Model (2), $y = X\beta + \alpha_1 \text{India} + \alpha_2 \text{Philippines} + \alpha_3 \text{AsiaOc} + \alpha_4 \text{EuropeUs} + \alpha_5 \text{AfricaSA} + \delta_1 \text{ysmIndia} + \delta_2 \text{ysmPhilippines} + \delta_3 \text{ysmAsiaOc} + \delta_4 \text{ysmEuropeUs} + \delta_5 \text{ysmAfricaSA}$

Implied years to equality is calculated by $-\alpha_i/\delta_i$.

The figures in parentheses are the t-statistics.

The reference group is Canadian-born

Source: based on regression in Table A6

Table 9 Years to equality, women

	Toronto		Vancouver	
	Model (1)	Model (2)	Model (1)	Model (2)
India	41.14	33.13	42.94	42.82
Philippines	32.55	39.12	31.24	27.58
AsiaOc	38.96	30.28	41.93	34.33
EuropeUs	35.38	37.95	32.84	37.89
AfricaSA	32.49	34.14	38.09	44.14

Table 9 summarizes the results of the two models. Overall, the outcome that we get is that the immigrant groups need more time to assimilate into the market in Vancouver than in Toronto, except for the Filipino and the EuropeUs groups.

6 Conclusion

This paper mainly investigates the performance of Indian immigrants and Filipino immigrants in the Toronto and Vancouver labour markets, for both females and males. For purposes of comparison, three groups are added in this paper; the Asia group (except India and Philippines), Africa, Europe, and America.

The data set is the 2006 Canadian Census. From the results of the empirical work, some conclusions can be made.

1. In Toronto, the Indian and Filipino male immigrants have smaller entry earnings disadvantages than the female group. However the situation is reversed in Vancouver, where female groups perform better than male groups.

2. Filipino immigrants could integrate into the Toronto and Vancouver labour markets much better than Indian immigrants, whether a same assimilation rate is assumed or not; there is an

exception in the case of Toronto for the females when different assimilation rates are assumed and another one for males when the same assimilation rate is assumed.

Comparing Indian and Filipino male immigrants, after controlling for different assimilation effects across groups, Indian immigrants need more years to catch up with the earnings of Canadian-born individual than Filipino immigrants. The situation is much worse in Vancouver, where Filipino males need fewer years to catch up with native persons than in Toronto while Indian males need a larger number of years than in Toronto. The years that need to catch up with native persons are even larger for females. In order to converge to native individuals' earnings, Filipino females need the years that less than the Indian female.

From the results of the F-test of the equality of India and Philippines entry effect and assimilation effect, the differences between the Indian and Filipino immigrants for both genders in Toronto and Vancouver are all statistically significant except for the male group in Toronto.

3. On the whole, whether the groups face the same assimilation rate or not, female immigrants tend to faster male immigrants.

Overall, it is very difficult to take all factors into consideration when studying the performance of immigrants in the labour market. In this paper, I assumed all the immigrants face the same labour market conditions, so the differences in their performances only depend on their human capital and characteristics. In further studies, research should be done not only on the immigrants in metropolitan areas, but we also need to keep an eye on the other small cities or even rural places since many immigrants no longer decide to settle down in the big cities.

Appendix

Table A1 Variable descriptions

lnwage	logarithms of wages and salaries in the year previous to the Census
age	age (taken as the midpoint of five-year age groups)
educ	education in years (see Appendix Table A2)
exp	work experience in years, calculated as age – 6 – educ
expsq	experience squared
married	dummy variable for historical comparability indicator of marital status
language	dummy variable for individual who can speak at least one of the Canadian official languages
wks0113	dummy variables for 1 to 13 weeks worked in previous year (reference: 49-52 weeks)
wks1426	dummy variables for 14 to 26 weeks worked in previous year (reference: 49-52 weeks)
wks2739	dummy variables for 27 to 39 weeks worked in previous year (reference: 49-52 weeks)
wks4048	dummy variables for 40 to 48 weeks worked in previous year (reference: 49-52 weeks)
hrs0119	dummy variables for 1 to 19 hours worked for pay or self-employment in previous week (reference: 40-44 hours)
hrs2029	dummy variables for 20 to 29 hours worked for pay or self-employment in previous week (reference: 40-44 hours)
hrs3034	dummy variables for 30 to 34 hours worked for pay or self-employment in previous week (reference: 40-44 hours)
hrs3539	dummy variables for 35 to 39 hours worked for pay or self-employment in previous week (reference: 40-44 hours)
hrs4549	dummy variables for 45 to 49 hours worked for pay or self-employment in previous week (reference: 40-44 hours)
India	dummy variable for individuals born in India
Philippines	dummy variable for individuals born in Philippines
AsiaOc	dummy variable for individuals born in Oceania and others and Asia areas excluding India and Philippines
EuropeUs	dummy variable for individuals born in Europe and the U.S.
AfricaSA	dummy variable for individuals born in Africa, South America, Central America, Jamaica, and other Caribbean and Bermuda area
ysm	years since immigration (for immigrants)
ysmIndia	the interaction of ysm and India
ysmPhilippines	the interaction of ysm and Philippines
ysmAsiaOc	the interaction of ysm and AsiaOc
ysmEuropeUs	the interaction of ysm and EuropeUs
ysmAfricaSA	the interaction of ysm and AfricaSA

Table A2 Definition of variable educ (number of years of education)

educ	The highest degree individuals have
8	-None
12	-High school graduation certificate or equivalency certificate
13	-Other trades certificate or diploma -College, CEGEP or other non-university certificate or diploma from a program of 3 months to less than 1 year
14	-College, CEGEP or other non-university certificate or diploma from a program of 1 year to 2 years -College, CEGEP or other non-university certificate or diploma from a program of more than 2 years
15	-University certificate or diploma below bachelor level
16	-Bachelor's degree
17	-University certificate or diploma above bachelor level
18	-Master's degree
22	-Degree in medicine, dentistry, veterinary medicine or optometry -Earned doctorate degree

Table A3 Regression results of Model (1), men

Variable	Toronto		Vancouver	
	parameter	t-value	parameter	t-value
Intercept	9.4001	188.67	9.2776	125.58
educ	0.0508	27.21	0.0493	15.96
exp	0.0346	17.59	0.0437	-12.68
expsq	-0.0007	-16.87	-0.0008	-12.68
married	0.2311	20.42	0.1997	11.22
language	0.2186	5.61	0.2317	4.42
ysm	0.0110	17.55	0.0128	12.03
wks0113	-1.6972	-51.74	-1.6460	-34.05
wks0113	-1.0060	-42.05	-0.8782	-23.69
wks2739	-0.5767	-24.71	-0.5231	-14.35
wks4048	-0.1710	-11.89	-0.1288	-5.94
hrs0119	-0.6044	-15.57	-0.6097	-10.77
hrs2029	-0.5522	-16.48	-0.6097	-12.63
hrs3034	-0.4245	-12.64	-0.4244	-9.16
hrs3539	0.0413	2.39	0.0204	0.72
hrs4549	0.1200	6.89	0.1368	4.75
India	-0.5367	-23.10	-0.6176	-15.68
Philippian	-0.4757	-16.49	-0.4784	-10.33
EuropeUs	-0.3418	-15.50	-0.4609	-11.55
AsiaOc	-0.5372	-32.20	-0.6635	-23.41
AfricaSA	-0.4350	-21.36	-0.4856	-9.10
Adjusted R ²	0.2895		0.2931	
N	24801		10261	

Table A4 Regression results of Model (2), men

Variable	Toronto		Vancouver	
	parameter	t-value	parameter	t-value
Intercept	9.4132	189.02	9.2961	125.27
educ	0.0510	27.35	0.0496	16.05
exp	0.0337	17.11	0.0434	-12.53
expsq	-0.0006	-16.36	-0.0008	-12.53
married	0.2349	20.78	0.2006	11.28
language	0.2080	5.34	0.2102	3.99
wks0113	-1.6881	-51.52	-1.6438	-34.04
wks1426	-0.9953	-41.62	-0.8746	-23.62
wks2739	-0.5705	-24.48	-0.5207	-14.29
wks4048	-0.1684	-11.72	-0.1278	-5.90
hrs0119	-0.6023	-15.54	-0.5842	-10.64
hrs2029	-0.5523	-16.51	-0.6110	-12.67
hrs3034	-0.4266	-12.73	-0.4194	-9.06
hrs3539	0.0409	2.37	0.0203	0.71
hrs4549	0.1197	6.90	0.1378	4.79
India	-0.5547	-16.44	-0.5923	-9.79
Philippian	-0.5273	-10.50	-0.5428	-7.11
EuropeUs	-0.2330	-8.34	-0.2784	-5.23
AsiaOc	-0.6740	-29.65	-0.7789	-21.64
AfricaSA	-0.3701	-11.40	-0.4838	-5.36
ysmIndia	0.0122	6.22	0.0111	3.70
ysmPhilippian	0.0144	5.14	0.0172	4.02
ysmAsiaOc	0.0204	16.55	0.0197	11.58
ysmEuropeUs	0.0204	7.82	0.0063	3.83
ysmAfricaSA	0.0077	5.38	0.0127	3.33
Adjusted R ²	0.2919		0.2952	
N	24801		10261	

Table A5 Regression results of Model (1), women

Variable	Toronto		Vancouver	
	parameter	t-value	parameter	t-value
Intercept	8.8781	179.39	8.999	121.67
educ	0.0808	38.72	0.0676	19.58
exp	0.0351	18.10	0.0337	10.56
expsq	-0.0006	-15.51	-0.0007	-10.09
married	-0.0100	-0.91	0.0484	2.86
language	0.1618	4.50	0.0915	1.91
ysm	0.0155	23.93	0.0142	12.78
wks0113	-1.6185	-63.64	-1.6043	-40.72
Wks1426	-0.8529	-42.20	-0.8492	-27.50
wks2739	-0.5589	-25.42	-0.4081	-12.68
wks4048	-0.1358	-9.44	-0.1147	-5.29
hrs0119	-0.6608	-27.82	-0.5825	-17.61
hrs2029	-0.4555	-22.51	-0.3316	-11.42
hrs3034	-0.2890	-12.47	-0.1759	-5.43
hrs3539	0.1116	7.95	0.2158	9.27
hrs4549	0.1846	8.44	0.2584	6.86
India	-0.6377	-26.07	-0.6098	-15.29
Philippian	-0.5045	-19.63	-0.4437	-10.89
EuropeUs	-0.5484	-24.48	-0.4664	-11.29
AsiaOc	-0.6039	-34.33	-0.5954	-21.09
AfricaSA	-0.5036	-24.80	-0.4785	-9.17
Adjusted R ²	0.3406		0.3244	
N	24796		10219	

Table A6 Regression results of Model (2), women

Variable	Toronto		Vancouver	
	parameter	t-value	parameter	t-value
Intercept	8.895175	179.51	9.011611	121.40
educ	0.080728	38.58	.0679973	19.71
exp	0.0342	17.58	0.0333	10.42
expsq	-0.0006	-14.99	-0.0006	-9.91
married	-0.0074	-0.70	0.0465	2.75
language	0.1526	4.25	0.0759	1.57
wks0113	-1.6124	-63.46	-1.5974	-40.57
Wks1426	-0.8497	-42.09	-0.8496	-27.53
wks2739	-0.5576	-25.40	-0.4056	-12.62
wks4048	-0.1342	-9.34	-0.1137	-5.24
hrs0119	-0.6589	-27.78	-0.5806	-17.57
hrs2029	-0.4558	-22.55	-0.3304	-11.39
hrs3034	-0.2880	-12.44	-0.1762	-5.45
hrs3539	0.1115	7.95	0.2140	9.20
hrs4549	0.1834	8.40	0.2579	6.86
India	-0.7222	-19.97	-0.6123	-9.62
Philippian	-0.4420	-9.93	-0.5019	-7.91
EuropeUs	-0.4516	-15.84	-0.2879	-5.09
AsiaOc	-0.7298	-29.72	-0.6934	-19.72
AfricaSA	-0.4643	-14.73	-0.3575	-3.87
ysmIndia	0.0217	10.31	0.0143	4.32
ysmPhilippian	0.0113	4.40	0.0182	5.15
ysmAsiaOc	0.0240	18.00	0.0203	11.82
ysmEuropeUs	0.0119	12.88	0.0076	4.24
ysmAfricaSA	0.0136	10.14	0.0081	2.05
Adjusted R ²	0.3424		0.3262	
N	24796		10219	

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