East and South Asian Immigrants' Performance in the Ontario Labour Market

by

Qing Li

(3000013)

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Supervisor: Professor Gilles Grenier

ECO 7997

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Abstract

East and South Asia are now the major sources of immigration in Canada. This paper uses the 1996 and 2001 censuses to investigate the performance in the labour market of male and female immigrants from these areas. The focus is on five countries: Mainland China, Hong Kong, India, Vietnam, and the Philippines. Based on cross-sectional and pooled data regressions, this paper compares immigrants' performance in the labour market to native-borns' in terms of entry effect, assimilation effect, cohort effect and country effect. Two models are considered, one where the assimilation effect is the same for all groups, and the other one where it differs. A disappointing result is that East and South Asian immigrants, especially the males, are not expected to be able to assimilate into the labour market in their entire working life. When comparing among the immigration groups, an interesting result is that immigrants from Hong Kong and Vietnam do better on average than the other groups. Another interesting result is that female immigrants assimilate faster than males. When the assimilation effect differs among the groups, the estimated assimilation time is faster for the groups investigated.

Introduction

Since the Point System was introduced in 1967, the sources and rates of immigration in Canada have dramatically changed. The number of immigrants increased rapidly and the traditional sources of immigration shifted from Europe to the less developed countries. All those modifications have affected many aspects of the society. Thus, in the past two decades, the way immigrants have performed in the labour market in Canada has become a research topic for both government and academic institutes.

In the recent decades, Asia and especially the countries in East and South Asia, such as Mainland China, Hong Kong, India, the Philippines and Vietnam, became the new top source of immigration. From research on immigrants, a generally accepted conclusion is that complete assimilation is very difficult for the more recent cohorts. This conclusion applies to all immigrants from different areas of the world. Following the methodology developed in the past decades, this paper mainly focuses on the performance of immigrants from five areas: China Mainland, Hong Kong, India, Vietnam, and the Philippines. The pattern of assimilation of those groups is examined and compared to that of other immigrants. The censuses of 1996 and 2001 are used and the analysis is done for both males and females living in Ontario, since approximately 50 per cent of those immigrants settled down in Ontario.

This paper is composed of five parts. Part one is a sketch of the immigration history of the investigated groups and of the changes in immigration legislations. Part two is a review of several representative studies on immigration, from Chiswick (1978) to the

most recent study of Aydemir and Skuterud (2005). Part three introduces the basic model and the data sets used. Part four contains the main results of this paper. Regressions on cross sectional data and pooled data are applied to estimate entry effects, assimilation effects, cohort effects and country effects.[1] Eight tables are presented to show the details of the analysis. The results differ between males and females, between cross sectional and pooled data, and whether the same assimilation effects are assumed or not. Part five concludes the paper.

The prospects for immigrants who arrived in the 1990's are not optimistic. Immigrants from East and South Asia are found not being able to assimilate completely into the labour market. However, after allowing for different assimilation effects, the assimilation of some groups, such as Hong Kong and Vietnam, seem to be attainable. Another interesting result is that female immigrants performed better than male immigrants.

I Immigration Policies and History of Asian immigrants in Canada

The early immigrants to Canada were mainly from Europe, with very few coming from Asia and the rest of the world. In the post-World War II period, immigration policies became more universal. The 1947 new immigration legislation was still meant to encourage European immigrants, but a particular exception was made for Indian, Pakistani, and Ceylonese immigrants because those three countries were former colonies

[1] See Part III, page 17, for precise definitions of those effects.

of the British Empire. However, the number of immigrants from those countries was very small. In 1957, a new regulation was issued, focusing on education, training, and skills for admission of immigrants. On October 1, 1967, the Government brought in the most important changes to immigration legislation. Immigrants were divided into four categories: independents, assisted relatives, family members and refugees. The Point System provided criteria for admission to the independent and assisted relatives categories. When the Point System was introduced, policies emphasized mainly the education and technical skills of immigrants. In the late 1970's, however, the emphasis was changed to give more consideration to human rights and humanitarians issues.

During that period, Asia gradually became the main source of Canadian immigrants. According to the Canadian Censuses of 1996 and 2001, China, Hong Kong, India, the Philippines and Vietnam, all countries located in the East and South of Asia, were the most common places of birth of Asian immigrants. Before investigating these immigrants' performance, their history is briefly reviewed.

Chinese immigrants were the earliest group of Asians coming to Canada. They started arriving in British Columbia around 1858. Most of them came through the United States. At that time, gold was discovered in California, and Chinese worked there as miners. A similar scenario took place in Canada, in the Fraser Valley of British Columbia. During the following decades, the number of Chinese immigrants remained at a relatively low level. Many of those immigrants were contract workers for the construction of the transcontinental Canadian Pacific Railway.

During the last century and a half, different generations of Chinese immigrants have experienced all kinds of social and cultural attitudes towards them. As Peter S. Li (1998) mentioned, anti-Orientalism sentiments were widespread during the period of 1858 to 1923 and a $500 head tax was applied on Chinese immigrants in 1903. The period of 1923 to 1947 was an era of exclusion of Chinese immigration: "In 1923 the Canadian Parliament passed the Chinese Immigration Act, the most comprehensive legislation to prevent Chinese from entering the country and to control those already here."(Li, 1998, p34-35) The civil rights of those already in this country were clearly violated.

A new epoch for Chinese immigration started in 1947. Chinese immigrants gained their civil rights following World War II. The number of Chinese immigrants increased dramatically after 1967 when the immigration policy was changed and the Point System introduced. For instance, between 1968 and 1976, 89,868 Chinese immigrants were admitted. (Li, 1998, p99) They were not only from Mainland China, but also from Hong Kong and Taiwan. In the subsequent years until recently, immigration from Mainland China increased dramatically and China became one of the top sources of immigration. Before 1997, there was a surge in Hong Kong immigration due to the return of Hong Kong to China. The new arrivals are different from their predecessors, coming from more heterogeneous backgrounds; many of them have professional and technical skills. The more recent immigrants appear to be well-educated and cosmopolitan, and those arriving as business immigrants often have substantial capital. "By 1991 over half of all employed Chinese-Canadians worked in white-collar occupation, as many as 28 per cent of them in

managerial, professional and technical jobs." (Li, 1998, p7)

India was another country of early Asian immigration to Canada. The history of Indian immigrants is somewhat similar to that of the Chinese. The first Indian immigrants arrived in Canada at the beginning of the 20th century. Their first destination was also British Columbia. However, the reasons for immigration were different from those of the Chinese. In 1897, at Queen Victoria's Jubilee, and in 1902, at the celebration the coronation of Edward VII, some Sikh soldiers from Punjab visited Canada on their way home from London. After returing to India for a short time, they came back to Canada and became the first Indian immigrants. Between 1906 and 1908, around five thousand people emigrated from India (Halli, 1987). This flows somewhat resulted from "a program of propaganda in Northern India by some Canadian companies to stimulate interest in emigration." (Halli, 1987, p38) Another important reason was the exclusionary head tax of $500 placed on Chinese immigrants. The atmosphere was bad for the Chinese immigrants, but it benefited the South Asians already in Canada. "Economic prospects for the future brightened, and people began writing to their friends and relatives in India, encourage them to come to Canada."(Buchignani, Indra, and Srivastiva, 1985, p8). The jobs found by early Indians were labour-intensive, as for the Chinese. There was also a hostile attitude by local people in British Columbia toward Indians. In 1913, the federal government issued an order-in-council to prohibit immigration from India. Indians in Canada were denied political rights for a long time.

After World War II, however, the situation of immigration changed and the Indian

settlers regained their rights. Before 1981, India was the seventh main source of immigration. However, during the 1980's and 1990's, India became the third main source of immigration. As a former British colony, most higher education in India is carried out in English. Furthermore, the long association with British culture had resulted in Indians being familiar with many elements of the Canadian society. Thus, Indians are able to adapt easily to the daily life in Canada.

Vietnam immigrants had a different story than that of the Chinese and Indian immigrants. Vietnam was a French colony between 1887 and 1954. "The emigration of Cambodians, Laotians and Vietnamese is directly linked to the political upheavals that shook the former French Indochinese territories since the Second World War." (Dorais, 2000, p2) It is for these political reasons that two particular categories of Vietnamese landed in Canada: students and refugees.

The first Vietnamese immigrants were students who came to Canada to obtain education in French language universities during the 1950's and 1960's. Many of them settled there and found jobs. The Vietnam War led to an abundant number of refugees coming to Canada. The first wave occurred before the victory of the Communists in 1975 and their number grew rapidly between 1975 and 1976. They were composed of urban middle-class people and of members of the South Vietnamese armed forces. Most of them had relatively high skills. "Their choice of Canada as a country of asylum was often linked to the fact that they had family here – children, brothers or sisters already settled – or that they were quite fluent in French." (Dorais, 2000, p7) Furthermore, Canada's

economy was expanding, which was an attraction for the Vietnamese. In 1976, the Canadian government allowed non-profit organizations and certain groups to sponsor refugee families. After 1982, the Canadian government accepted increasing numbers of Vietnamese sponsored by relatives already in Canada. The aim was to encourage family reunification. Based on this trend, the proportion of the refugee and family categories was very high among the Vietnamese immigrants.

In the late 1960's, Philippines immigrant started arriving in Canada in significant numbers. Contrary to the aforementioned countries, many of the early Philippines immigrants were single females who worked as nurses, medical doctors, technologists, and secretaries in Canada. In the 1970's and 1980's, since immigration legislation tended to emphasize family reunification, the imbalance between genders declined and the population of Filipinos increased. Between 1981 and 1990, the Philippines provided 56,400 immigrants and ranked seventh among the top sources of immigration. During the period of 1991 to 1996, the Philippines escalated to the fourth position and the population of immigrant was 71,300, the same as the number of Indians. Half of Filipinos lived in Ontario and around a quarter of them lived in British Columbia. (Government of Canada, 2000)

II A literature review of empirical research on immigration

As more and more immigrants from different ethnicities settled down and entered the developed countries labour markets, various dimensions of their experiences attracted

attention, including the economic ones. In the last three decades, researches on immigrants' economic performances have been widespread. The following is a review of some selective representative contributions.

Chiswick(1978) used the 1970 census of the United States to compare the earnings of native-born and foreign-born white men (91 percent of the foreign born were white in 1970 census of the United States). He specified testable hypotheses related to the effects of schooling, work experience before and after immigration, human capital, growth rate of earning, and motivation. A human capital earnings function was used and the basic model was a linear regression of the natural logarithm of annual earnings. Variables were chosen according to the specified hypotheses, including year of schooling, marital status, year of immigration, year of experience, place of birth, and so on. From his analysis, Chiswick pointed out that foreign born men's aggregate earnings were one percent lower annually than those of the native born; however, native born men earned three percent less weekly than foreign born men, especially when the years of immigration were held constant and evaluated at the mean point. Although preimmigration labour market experiences and schooling had lower returns on earnings for foreign born, investments in postschool training were found to be more profitable. Holding other characteristics constant, immigrants earned on average substantially less than native borns when they arrived in their new country; however, the growth rate of earnings was higher, particularly during their first few years in the country. The earnings converged to those of the native borns after ten to fifteen years, and they even exceeded them afterwards.

Following the release of Chiswick's study, a large body of literature emerged that analyzed both male and female immigrants, focusing on specific immigrant populations or some other aspects. Borjas (1985) borrowed the same theoretical framework and improved the empirical methodology to reexamine the conclusions found in most cross-sectional empirical studies. He used the 1970 and 1980 Public Sample from the United States census. His use of two censuses allowed him to distinguish between the assimilation and cohort effects. He criticized Chiswick's methodology in the following terms: "...the cross-section regressions commonly used in the literature confound the true assimilation impact with possible quality differentials among immigrant cohorts."(Borjas, 1985, p 464)

Borjas summarized his conclusions by pointing out that the cross-sectional studies overestimated the true growth rate of earnings of immigrants. With respect to specified cohorts, he found that the earnings of many cohorts not only increased little, but even decreased slightly, in spite of the fact that a dramatic growth rate was observed in cross-section analysis. Borjas's main hypothesis that the quality of immigrant cohorts declined was demonstrated by his research results. The more recent cohorts experienced lower earnings than the former ones. Perhaps the decline was partly due to the bad labour market conditions such as recessions and fall in labour demand, but the cross-sectional change in immigrant earnings was significant enough to warrant more attention. The paper reversed the conclusions of cross-section studies of immigrant earnings. It showed that understanding immigrants' experiences required not only to consider the main

immigrants' demographic characteristics, but also the admission policies, the economic situations in the source countries and the demand shifts for both native and foreign born labour. The paper provided a revolutionary methodology for later researches and also raised serious questions about the economic interpretation of immigrant behaviours in the labour market.

Baker and Benjamin (1994) used Canadian census data to research immigrant's performance in Canadian labour market in past decades. The 1971, 1981 and 1986 censuses were used and males between the age of 16 and 64 were focused on. The conclusion of this paper was in agreement with those U.S researches. The more recent immigrants had lower entry earnings and smaller skill advantages than the earlier cohorts. More recent immigrants had their earnings twenty percent lower than their predecessors. They assimilated at a modest pace, and even if that pace was similar to that of with their predecessors, their convergence with native born may not be attainable.

Bloom, Grenier and Gunderson (1995) also used the 1971, 1981 and 1986 Canadian censuses to research the immigrant's assimilation into the labour market. They used Chiswick's immigrant earnings equation, to which they added cohort-specific effects based on Borjas's research. The study researched the performances of both male and female immigrants. Separate cross-sectional regressions and pooled regressions were reported for several regions of origin. The conclusions are similar to those of Borjas(1985) and Baker and Benjamin(1994). For immigrants who arrived before 1965, about fifteen years are needed for their earnings to catch up with those of the native born, for both

males and females, and for all regions of origin. However, post-1970 immigrants had more difficulty to assimilate into the labour market, and this is especially true for male immigrants from Asia, Africa and Latin America. Actually, for the more recent cohorts, the results suggest that assimilation could even never happen. The decrease in immigrant assimilation may be the result of changes in the immigration policies, increased discriminations towards visible minorities and reduced absorptive capability of the labour market due to the effect of prolonged recession. The authors also point out that, although the three aforementioned factors have contributed to declines in the immigrant assimilation, further research is needed to quantify the various factors that could be better explained.

Grant (1999) used the 1981, 1986 and 1991 Canadian censuses and reached a unique conclusion. She applied the quasi-panel approach of Baker and Benjamin to measure assimilation of immigrants. Grant's results implied a turnaround in recent immigrants' fortunes. New immigrants who arrived after the 1980's experienced a dramatically higher assimilation rate than the one of their predecessors. Immigrants who arrived between 1980 and 1985 have earnings growth rate of 17.2 percent relative to native born over their first five years in Canada. In contrast, immigrants who arrived between 1976 and 1980 experienced 0 percent assimilation rate during the same period. Moreover, the cohort that arrived in the late 1980's had similar entry earnings compared with immigrants who arrived in the early 1980's. This research implied that newer cohorts assimilated much faster than their predecessors.

The author suggested several reasons. One reason is the difference in the demographic characteristics of immigrants, such as ethnicity, region of origin, official language ability, and so on. The next explanation is the selection bias resulting from different labour market participation rates. The third reason is the better economic environment in 1990 for immigrants who arrived between 1980 and 1985. Another possibility is the lack of considering age at immigration. The final possibility is the negative relationship between initial immigrant earnings and subsequent earnings growth. Although the author suggested these potential causes, she also emphasized that she was unable to explain the turnaround based on the observable characteristics obtained in the census data. Thus, further research is required.

Recently, the 2001 census became available and the research was developed further. Aydemir and Skuterud(2005) used five censuses from 1981 to 2001 to explore the causes of the decline in entry earnings of male and female immigrants. The method was also based on works by Chiswick (1978) and Borjas (1985). The research distinguished between Canadian and foreign experience and education. It also specified cohort effects for every five years and investigated the effect of YSM (years since migration) on the different cohorts. The major finding is that between one-quarter and one-half of the overall shrink in the entry earnings of both gender immigrants may be due to decreasing wage returns to foreign labour market experience. Furthermore, this factor affected more strongly the immigrant from non-traditional sources. However, foreign education was not responsible for the entry earnings decline. Another reason accounting for one-third of the

deterioration was the shift in the knowledge of official languages and of the mother tongues of the new immigrants. This shift was a result of changes from traditional European countries to non-traditional Asian countries. But this shift did not affect the declining return to foreign experience. Finally, when factors such as knowledge of official languages, mother tongue and place of birth were controlled for, and when the returns to foreign experience were allowed to vary between cohorts, then the decline in entry earnings of native born labour market entrants would be the cause for the remaining part of deterioration in entry earnings of male and female immigrants.

Overall, although Grant (1999) found that some immigrants cohorts may be finally successful in the labour market, most other researches concluded that the assimilation for immigrants was slight, or even unattainable.

III Empirical Framework: Data and Model

The studies reviewed in last section all investigated immigrants from all sources living in the whole country. Since East and South Asia are now the top sources of immigration, I will focus on the performance of this particular group in the labour market of Ontario, where more than half of those immigrants live. Other groups of immigrants are also included for comparison purposes. The 1996 and 2001 Canadian censuses public use microdata are used and a 100% sample is taken for both males and females aged 25 to 64 who reported positive wages and salaries. The basic methodology is borrowed from that of Bloom, Grenier, and Gunderson (1995), with dummy variables being added for

source countries:

$$y = X\beta + \alpha I + \delta_{YSM}(I) + \Sigma_j \Theta_{jCOHj}(I) + \gamma_1 China + \gamma_2 Hongkong + \gamma_3 India + \gamma_4 Philipphines + \gamma_5 Vietnam + \gamma_6 OtherEaSoAsia + \gamma_7 WestAsia + \gamma_8 OtherEurope + \gamma_9 Africa + \gamma_{10} restWorld \quad (1)$$

where

y = natural logarithm of earnings;

X = vector of human capital determinants related to earnings and other control variables (including education, working experience, marriage index, weeks worked in pervious year of censuses, hours worked in previous week of censuses, year index, area index);[2]

I = dummy variable equaled to 1 for immigrants, 0 for native borns;

$_{YSM}$ = year after immigrants migrated (for native borns, it is coded as 0);[3]

$_{COH}$ = a vector of time-period dummy variables of immigrants' year of migration, coded in every five years (for native borns, it is coded as 0 and the reference cohort is pre1971);

China, Hongkong, India, Philippines, Vietnam, WestAsia, OtherEaSoAsia, OtherEurope, Africa, restWorld are dummy variables for places of birth.[4] The reference category includes the United States, and the countries of Western Europe that are identified in the dataset, United Kingdom, Germany, Italy, Netherlands.

All the above regressions are estimated on the basis that the coefficient of YSM is the same for all groups. Actually, since qualities of immigrants differ across regions, the

[2] See Appendix A for details.
[3] The profile is assumed to be linear for simplicity; some authors also use a quadratic profile.
[4] Although this paper is focused on Asian immigrants, the other areas are divided into four groups and included in the regression. It will provide trends for all immigrants and for the investigated groups, compared with other groups.

coefficients are likely to be different and they will affect the assimilation time. Therefore, extension of the model is provided with the effect of YSM being allowed to vary by source country. Consequently, I add interaction terms between YSM and place of birth into equation (1) and regress on the new equation to see the changes in the assimilation process.

$$y = X\beta + \alpha I + \delta_{YSM}(I) + \Sigma_j \Theta_{jCOHj}(I) + \gamma_1 China + \gamma_2 Hongkong + \gamma_3 India + \gamma_4 Philipphines + \gamma_5 Vietnam + \gamma_6 OtherEaSoAsia + \gamma_7 WestAsia + \gamma_8 OtherEurope + \gamma_9 Africa + \gamma_{10} OtherAmerica + \gamma_{11} restWorld + \lambda_1 ysmChina + \lambda_2 ysmHongkong + \lambda_3 ysmIndia + \lambda_4 ysmPhilippines + \lambda_5 ysmVietnam + \lambda_6 ysmWestAsia + \lambda_7 ysmOtherEaSoAsia + \lambda_8 ysmOtherEurope + \lambda_9 ysmAfrica + \lambda_{10} ysmOtherAmerica + \lambda_{11} ysmrestWorld \quad (2)$$

The regression are estimated for each census and for pooled data separately. When only one census is used, the COH variables are omitted. The results obtained by using pooled data are considered most important. Appendix A defines all the variables used in the model. Appendix Table A1, Table A2, Table A3 and Table A4 display the descriptive statistics and estimated parameters for males and females respectively.

When studying immigrant's performance in the labour market, the three main elements of analysis are the entry effect, the assimilation effect and the cohort effect. The definition of those three effects is similar in many studies, and in this paper I borrowed the definitions form Bloom, Grenier and Gunderson (1995).

The entry effect is simply the estimated earning difference between immigrants and between native born and immigrants when they first entered the country. Usually, the entry effect is expected to be negative. The assimilation effect is the average change in relative immigrants' earnings every year after they migrate to Canada. Usually, the assimilation effect is expected to be positive. It is assumed the same in the basic model; while in the second model, it varies by source country. The cohort effects reflect the unobservable quality of particular immigrant cohorts relative to the omitted pre1971 reference group.

In this paper, there is a fourth effect: the country effect, which reflects some immigrant's basic background, such as language, education, motivation, which differs between each place of origin and the reference group (United States, United Kingdom, Germany, Italy and Netherlands)

IV Empirical results and interpretations

IV.1 The basic model

Male immigrants performance is investigated first. In Table A1 of the Appendix, we can see some basic characteristics of the sample in the last decade of the 20th century. The average schooling years, working experiences and wage are similar in the two data sets that are used in this paper. For instance, the average years of education are 13.4 in 1996, 13.7 in 2001 and 13.6 in the pooled sample. This implies that the main visible characteristics related to labour market performance keep steady through time. For all the

Table 1

Entry and assimilation effects of Canadian immigrants, men, 1996 and 2001

	1996		2001	
Variable	**Entry Effect γ * 100**	**Implied Years to equality**	**Entry Effect γ * 100**	**Implied Years to equality**
Reference Group	-26.995	29.5	-20.942	20.9
	(-13.08)		(-9.23)	
China	-36.315	69.2	-30.675	76.1
	(-10.00)		(-9.08)	
Hongkong	-15.110	46.0	-14.370	52.1
	(-4.49)		(-4.17)	
India	-18.558	49.8	-18.837	58.7
	(-6.18)		(-6.64)	
Philippines	-27.155	59.2	-24.845	67.5
	(-7.52)		(-7.28)	
Vietnam	-19.885	51.2	-7.299	41.7
	(-5.19)		(-1.92)	
OtherEaSoAsia	-29.092	61.3	-30.167	75.4
	(-10.05)		(-11.13)	
WestAsia	-28.828	61.0	-23.079	64.9
	(-8.32)		(-7.24)	
OtherEurope	-3.225	33.0	-3.117	35.5
	(-1.84)		(-1.60)	
Africa	-20.732	52.2	-20.197	60.7
	(-6.62)		(-6.51)	
OtherAmerica	-16.434	47.5	-20.443	61.0
	(-7.78)		(-9.28)	
restWorld	20.094	7.5	9.629	16.7
	(2.22)		(1.00)	
Assimilation Effect δ* 100	0.915		0.678	
	(15.66)		(11.70)	

NOTES

The reference region of origin is the United States, United Kingdom, Germany, Italy and Netherlands.

The figures in parentheses are the t-statistics.

Implied year of equality is calculated by $(-\alpha-\gamma_i)/\delta$ which uses coefficients obtained by equation(1).

Source: Based on regressions in Table A2.

Table 2

Entry, assimilation and cohort effects, Canadian immigrants, men, Pooled Data

		Cohort Effect					
		Θ * 100					
		Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
		3.649	0.035	-0.159	-8.854	-21.052	-12.403
		(2.04)	(0.02)	(-0.06)	(-3.00)	(-6.28)	(-3.19)
		Implied years to equality					
Variable	**Entry effect γ * 100**	Cohort Pre71	Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
Reference Group	-7.88 (-2.04)	26.3	14.1	26.2	26.8	55.8	96.4	67.6
China	-32.671 (-13.28)	135.2	123.0	135.1	135.7	164.7	205.3	176.5
Hongkong	-16.221 (-6.70)	80.3	68.2	80.2	80.9	109.9	150.5	121.7
India	-19.95 (-9.61)	92.8	80.6	92.7	93.3	122.3	162.9	134.1
Philippines	-26.343 (-10.62)	114.1	101.9	114.0	114.6	143.6	184.3	155.4
Vietnam	-17.25 (-6.26)	83.8	71.6	83.7	84.3	113.3	153.9	125.1
OtherEaSoAsia	-29.811 (-15.15)	125.6	113.5	125.5	126.2	155.2	195.8	167.0
WestAsia	-25.573 (-10.96)	111.5	99.3	111.4	112.0	141.0	181.7	152.9
OtherEurope	-3.948 (-3.02)	39.4	27.3	39.3	40.0	68.9	109.6	80.8
Africa	-21.402 (-9.69)	97.6	85.4	97.5	98.1	127.1	167.8	139.0
OtherAmerica	-21.098 (-13.70)	96.6	84.4	96.5	97.1	126.1	166.8	137.9
restWorld	13.474 (2.04)	-18.6	-30.8	-18.8	-18.1	10.9	51.5	22.7
Assimilation Effect δ* 100		0.300 (2.96)						

NOTES:

The reference region of origin is the United States, United Kingdom, Germany, Italy and Netherlands and the reference cohort is pre-1971 cohort.

The figures in parentheses are the t-statistics.

Implied year of equality is calculated by $-\alpha/\delta$ for reference group of reference cohort;

by $(-\alpha-\Theta_j)/\delta$ for reference region of origin and other cohorts;

by $(-\alpha-\gamma_i)/\delta$ for other group of region of origin and other cohorts;

by $(-\alpha-\gamma_i-\Theta_j)/\delta$ for other region of origin of other cohorts;

All coefficients are obtained by regression results of equation (1).

Source: Based on regressions in Table A2.

main countries that are researched and compared, the proportions of male immigrants increased in Ontario between 1996 and 2001, especially those from India and the other countries in East and South Asia in Ontario.

Table 1 and Table 2 summarize the results for the male immigrants' performance in the Ontario labour market. Table 1 presents the cross-sectional results and Table 2 the pooled results. Results in Table 1 and Table 2 are accordance with the expectations of a negative entry effect and a positive assimilation effect. In Table 1, in 1996, the reference group (the United States, United Kingdom, Germany, Italy and Netherlands) has an average 27 per cent earnings disadvantage, compared with the native borns, when entering Canada. All the Asian immigrants have lower entry earnings than the reference group. For instance, China has 36.3 per cent disadvantage in earnings in 1996 compared to the reference group, which is the highest one among all groups listed in Table 1. The lowest entry effect is Hong Kong, which earns 15.1 per cent less than the reference group. Vietnam and India performs similarly, the entry effects being 19.9 per cent and 18.6 per cent respectively. The Philippines had a lower entry effect than China, but 27.2 per cent is

also relatively large, and it is just a little smaller than the one of other countries from East and South Asia which is 29.1 percent.

Although the positive assimilation effect is 0.92 per cent every year, it still takes the reference group 29.5 years to catch up with native men. Thus, the modest assimilation effect cannot close the huge gaps between the East and South Asian male immigrants and the native borns. Chinese need 69.2 years, almost a whole life time, to catch up with the native born. For Hong Kong, it takes 46 years, and Indian and Vietnamese need more time, 49.8 and 51.2 years. Filipinos and immigrants from other East and South Asia face an even longer assimilation time, although shorter than China, they still need 59.2 and 61.3 years respectively. It is obviously that in the 1996 census, Chinese male immigrants had the biggest difficulty to assimilate into the labour market and to converge to earnings of native males.

In the census of 2001, all male immigrants, except Indians, have better entry effect than in census 1996. In spite of the fact that most immigrants from those countries earned more than in 1995 when they entered Canada, the assimilation effect decreases to 0.68 per cent.[5] The narrowed gaps of entry earnings are offset by the decreasing assimilation rate in 2001 census. The reference group takes 20.9 years to converge to the earnings of the native born, which is shorter than in the previous census. However, all the other groups take longer, with the exception of Vietnam.

[5] When comparing the same type of estimates from two regressions, not all the differences between those two estimates are significant. The differences are just displayed as references in helping analysis. It is the same for other comparisons following in this paper.

Table 2 displays the regression results for the pooled data that control for the cohort effect. It is obvious that although other effects of human capital and other determinants of earnings are controlled for, the recent cohorts of male immigrants earned less at the time of entry than the previous ones. The male immigrants who arrived between 1971 and 1975, earned 3.6 per cent more than their comparable predecessors. For example, Chinese male immigrants who arrived between 1971 and 1975 earned 29 per cent (entry effect -0.32671 minus cohort7175 effect 0.0365) less than the reference group of European in pre-1971 cohort. The parameters for cohorts 7680 and 8185 do not differ from the reference cohort pre-1971. The male immigrants who arrived between 1986 and 1990, however, earned 8.9 per cent less than the reference cohort. For the cohort which arrived between 1991 and 1995, the gap of earnings peaked to 21.1 per cent. But the cohort 9600 reversed the continuous decline, the cohort effect declining to -12.4 per cent. For this cohort, perhaps, the situation may be reversing.

When the separate cohort effects are controlled for, the entry and assimilation effects decreased compared with results obtained from separate censuses. The entry effect of reference region of origin improves dramatically to 7.9 per cent. However, the other main countries investigated keep similar levels, compared to results obtained from separate censuses. The assimilation effect shrinks to 0.3 per cent per year. Thus, it takes the reference region of origin of the reference cohort 26.3 years to assimilate into the labour market. The reference group of Cohort 7175 performed the best among all cohorts investigated, needing only 14.1 years to catch up to the native born. But this trend does

not last through all cohorts, the years becoming longer and longer, except for the break after 1996. For most immigrants, assimilation seems to be unattainable. Male immigrants from Asia have difficult patterns of assimilation. For the cohort 7175, Hong Kong immigrants need 68.2 years to catch up, which is the shortest time among all Asian regions and all cohorts considered. All other countries can be seen as never being able to catch up, not only to the native borns, but also to reference group. The implied years to equality are larger than those estimated with cross-sectional data. As predicted in the papers reviewed in section II, the recent cohorts are not expected to assimilate fully in the sense of catching up with comparables Canadian born men.

Amongst the early immigrants, most women did not enter the labour market. However, in the past two decades, the imbalance between males and females in the labour market decreased. In the 1980's little research on immigrant's performance investigated female immigrants, but in the 1990's, economists realized the new situation of female immigrants and began to pay attention to their performance. This paper continues on the same trend and also focuses on female immigrants' performance.

Table 3 provides results for female immigrant's performance in the labour market based on cross-sectional data. The reference group is the same as that of males. The reference group, which is expected to perform the best among all the groups, has 30.1 per cent lower earnings than native females when they entered the country. However, compared with the other groups with the reference group, the advantage of the reference group is not as large as for males. The Filipino female have the highest entry effect

Table 3

Entry and assimilation effects of Canadian immigrants, women, 1996 and 2001

	1996		2001	
Variable	**Entry Effect γ * 100**	**Implied Years to equality**	**Entry Effect γ * 100**	**Implied Years to equality**
Reference Group	-30.126 (-13.14)	30.5	-33.637 (-14.00)	32.2
China	-12.738 (-3.20)	43.4	-9.657 (-2.71)	41.4
Hongkong	-0.727 (-0.20)	31.3	0.338 (0.10)	31.8
India	-8.341 (-2.36)	39.0	-7.224 (-2.26)	39.1
Philippines	-15.620 (-4.81)	46.3	-11.111 (-3.53)	42.8
Vietnam	-2.738 (-0.57)	33.3	1.368 (0.32)	30.8
OtherEaSoAsia	-5.019 (-1.43)	35.6	-13.405 (-3.43)	45.0
WestAsia	-7.053 (-1.50)	37.7	-17.469 (-5.61)	48.9
OtherEurope	-3.898 (-1.93)	34.5	-2.728 (-1.29)	34.8
Africa	-2.874 (-0.74)	33.4	3.455 (0.99)	28.9
OtherAmerica	-5.789 (-2.62)	36.4	-14.620 (-6.54)	46.1
restWorld	6.807 (0.62)	23.6	2.103 (0.21)	30.1
Assimilation Effect δ* 100	0. 987 (14.87)		1. 046 (16.70)	

NOTES:

The reference group is the United States, United Kingdom, Germany, Italy and Netherlands.

The figures in parentheses are the t-statistics.

Implied year of equality is calculated by $(-\alpha-\gamma_i)/\delta$ which uses coefficients obtained by equation(1)

Source: Based on regressions in Table A2.

Table 4

Entry, assimilation and cohort effects, Canadian immigrants, women, Pooled Data

		Cohort Effect **Θ * 100**					
		Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
		0.088005	-1.307	-10.369	-26.839	-25.011	-19.930
		(0.04)	(-0.35)	(-3.18)	(-7.24)	(-5.76)	(-34.63)
		Implied years to equality					
Variable	**Entry effect γ * 100**	Cohort Pre71	Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
Reference Group	-9.814 (-2.28)	28.3	28.0	31.3	58.2	105.6	100.4	85.7
China	-10.083 (-3.81)	57.3	57.1	60.3	87.2	134.7	129.4	114.8
Hongkong	-1.990 (-0.79)	34.0	33.8	37.0	63.9	111.4	106.1	91.5
India	-9.269 (-3.92)	55.0	54.7	58.0	84.9	132.3	127.1	112.4
Philippines	-13.412 (-5.93)	66.9	66.7	69.9	96.8	144.3	139.0	124.4
Vietnam	-4.393 (-1.35)	40.9	40.7	43.9	70.8	118.3	113.0	98.4
OtherEaSoAsia	-13.418 (-5.80)	67.0	66.7	69.9	96.8	144.3	139.0	124.4
WestAsia	-11.858 (-3.98)	62.5	62.2	65.4	92.3	139.8	134.5	119.9
OtherEurope	-3.861 (-2.64)	39.4	39.2	42.4	69.3	116.8	111.5	96.8
Africa	-0.347 (-0.13)	29.3	29.0	32.3	59.2	106.6	101.4	86.7
OtherAmerica	-13.215 (-8.30)	66.4	66.1	69.4	96.2	143.7	138.4	123.8
restWorld	2.035 (0.27)	22.4	22.2	25.4	52.3	99.8	94.5	79.9
Assimilation Effect δ* 100		0.347 (3.04)						

NOTES:

The reference group is the United States, United Kingdom, Germany, Italy and Netherlands and the reference cohort is pre-1971 cohort;

The figures in parentheses are the t-statistics;

Implied year of equality is calculated by $-\alpha/\delta$ for reference group of reference cohort;

by $(-\alpha-\Theta_j)/\delta$ for reference group of other cohort;

by $(-\alpha-\gamma_i)/\delta$ for other group of reference cohort;

by $(-\alpha-\gamma_i-\Theta_j)/\delta$ for other group of other cohort;

All coefficients are obtained by regression results of equation (1);

Source: Based on regressions in Table A2.

amongst all groups, and it is 15.6 per cent lower than that of the reference group. Chinese females earn 12.7 per cent less than the reference group when they entered the country. The Indians are in the middle range, having an 8.3 per cent earnings disadvantage. Since the parameters are not significant at the 5% and 10% level for Hong Kong, Vietnam and other East and South Asian countries, females from those areas have no disadvantages of earnings compared with the reference group. In regressions from the 1996 census, female's entry effects are widely better than males, and another interesting finding is that the assimilation effect is also better than that of male in the same census. It follows that females will spend fewer years to assimilate into the labour market than male. The reference group needs 30.5 years to make their earning equal to those of the native borns. For Chinese and Filipino females, assimilation time exceeds 40 years, but females from Hong Kong, Vietnam and other East and South Asian countries seem to assimilate into the labour market in the same number of years as the reference group.

The last two columns show the results from the 2001 census, and the trends for both entry effect and assimilation effect are similar to those of the 1996 census, Thus, the

average implied years to equality do not changed very much. One special case is that this time, females from other East and South Asia have a significant estimated entry effect. Another interesting thing is that Hong Kong and Vietnam still have a non-significant entry effect.

Using pooled data and controlling for the cohort effect, the results of Table 4 do not bring any major change. Although the entry effect decreases a bit, the assimilation effect declines a lot. The cohort effect goes up to its peak at cohort 8690 which is 26.8 per cent, and declines a little at cohort 9195 and more at cohort 9600. As for men, it seems that there is a turnover about the conclusion that more recent cohorts are doing worse. Thus, the assimilation years extend dramatically for cohort 8690, but for more recent groups, it begins to decrease. For all female immigrants who arrived between the 1970's and mid-1980, their earnings are not affected by the cohort effect; thus, immigrants who arrived during this period have almost the same implied years to equality as the pre-1971 reference cohort. For the reference group, it takes 28.3 years to assimilate into the labour market for both reference cohort, and in the period 1981 to 1985, the years increase to 58.2 years. Although Hong Kong and Vietnam still have the same scenarios as those ones in Table 3, they also need the same years as those of the reference group, and other groups require longer time. Thus, like males, the complete assimilation for most female immigrants also appears to be impossible. But Hong Kong and Vietnam immigrants who arrived in the 1970's bring the possibility for assimilation.

IV.2 Model with different assimilation effects by sources of country

Table 5 and Table 6 show the entry and assimilation effects, which now differ by source country, for males in cross sectional and pooled data representatively.

After specifying different assimilation effects, there are some changes in results. Both of the entry effect and assimilation effect are not significant for the reference group. For other groups, however, the entry effect increases compared with the results of Table 1. For instance, Chinese male immigrants have 66.7 per cent less earnings at entry than the reference group, compare to just 35.9 per cent in Table 1. India's entry effect increases the most among all countries after controlling for its own assimilation rate, its disadvantages in earnings going up to 62.4 per cent, which is three times more than the former one. One interesting phenomenon is that the gaps among groups are not as large as previously.

While the negative entry effect increases dramatically, the rate of assimilation also goes up. Contrary to the aforementioned ranking, the group of countries from East and South Asia has the quickest assimilation rate at 2.33 per cent per year. India also has a considerable rate of 2.08 per cent per year. Hong Kong and the Philippines have the similar rate which is around 1.5 to 1.7 per cent per year. China has a relatively lower rate than aforementioned countries and it is 1.19 per cent per year. In the case of Vietnam, it is only 0.84 per cent per year. It follows that implied years to equality in Table 5 improve, compared to those in Table 1, due to higher assimilation rate. The two groups that assimilate fastest are India and the group of other countries from East and South Asia,

Table 5

Entry and assimilation effects of Canadian immigrants, men, 1996 and 2001
(controlling for the assimilation effect)

	1996			2001		
Variable	**Entry effect $\gamma * 100$**	**Assimilation Effect $\lambda * 100$**	**Implied Years to equality**	**Entry effect $\gamma * 100$**	**Assimilation Effect $\lambda * 100$**	**Implied Years to equality**
Reference Group	-0.789 (-0.25)	0.043018 (0.43)	18.3	4.288 (1.16)	-0.088995 (-0.84)	48.2
China	-66.702 (-11.15)	1.188 (3.79)	54.8	-62.905 (-11.00)	1.349 (4.60)	46.5
Hongkong	-49.296 (-8.07)	1.532 (4.21)	31.8	-50.140 (-7.09)	1.443 (4.13)	33.9
India	-62.415 (-10.75)	2.084 (7.01)	29.7	-44.553 (-7.91)	0.796 (3.06)	57.0
Philippines	-63.463 (-9.85)	1.697 (4.43)	36.9	-53.831 (-8.20)	1.040 (3.00)	52.1
Vietnam	-45.990 (-4.91)	0.843 (1.22)	52.8	-43.324 (-3.75)	1.418 (2.21)	29.4
OtherEaSoAsia	-72.327 (-13.87)	2.330 (7.70)	30.8	-67.127 (-12.96)	1.701 (6.58)	39.0
WestAsia	-61.560 (-10.22)	1.381 (4.14)	43.8	-57.118 (-9.58)	1.407 (4.73)	40.1
OtherEurope	-31.160 (-7.71)	0.945 (6.73)	32.3	-30.856 (-6.84)	0.878 (6.01)	33.7
Africa	-69.505 (-12.03)	2.477 (8.32)	27.9	-62.518 (-10.21)	1.884 (6.54)	32.4
OtherAmerica	-48.128 (-10.76)	1.208 (6.14)	39.1	-45.769 (-8.92)	0.769 (3.88)	61.0
restWorld	4.259 (0.26)	0.300 (0.42)	-10.1	-6.632 (-0.32)	0.353 (0.43)	8.9

NOTES

The reference region of origin is the United States, United Kingdom, Germany, Italy and Netherlands and its assimilation effect is obtained by $\delta * 100$;

The figures in parentheses are the t-statistics.

Implied year of equality is calculated by $-\alpha/\delta$ for the reference region of origin,

by $(-\alpha-\gamma_i)/(\lambda_i+\delta)$for other groups,

which uses coefficients obtained by equation(2);

Source: Based on regressions in Table A4

Table 6

Entry, assimilation and cohort effects of Canadian immigrants, men, pooled data
(controlling for the assimilation effect)

			Cohort Effect Θ * 100					
			Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
			2.742	0.872	3.958	-0.148	-8.448	3.231
			(1.53)	(0.38)	(1.45)	(-0.05)	(-2.36)	(0.78)
			Implied years to equality					
Variable	**Entry effect γ * 100**	**Assimilation Effect λ* 100**	Cohort Pre71	Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
Reference Group	1.377 (0.35)	-0.026639 (-0.25)	51.8	154.8	84.5	200.6	46.2	-265.8	173.2
China	-60.069 (-13.94)	1.104 (5.01)	57.0	54.5	56.2	53.4	57.2	64.9	54.0
Hongkong	-44.910 (-9.29)	1.233 (4.79)	38.4	36.1	37.6	35.1	38.5	45.4	35.7
India	-46.963 (-11.03)	1.080 (5.24)	45.9	43.3	45.1	42.1	46.0	53.9	42.8
Philippines	-52.381 (-10.83)	1.044 (3.90)	52.8	50.1	52.0	48.9	53.0	61.1	49.7
Vietnam	-46.105 (-6.42)	1.309 (2.94)	37.0	34.9	36.3	33.9	37.1	43.6	34.5
OtherEaSoAsia	-63.884 (-16.21)	1.692 (8.12)	39.2	37.5	38.7	36.8	39.3	44.3	37.2
WestAsia	-54.634 (12.37)	1.226 (5.39)	46.7	44.4	46.0	43.4	46.8	53.7	44.0
OtherEurope	-28.364 (-8.99)	0.824 (7.79)	37.3	33.9	36.2	32.3	37.5	47.9	33.2
Africa	-61.080 (-13.80)	1.935 (8.96)	32.7	31.3	32.3	30.7	32.8	37.2	31.0
OtherAmerica	-42.627 (-11.80)	0.750 (4.97)	60.8	57.0	59.6	55.4	61.0	72.5	56.4
restWorld	3.258 (0.25)	0.149 (0.28)	-15.4	-37.8	-22.5	-47.7	-14.2	53.7	-41.8

NOTES:

The reference group is the United States, United Kingdom, Germany, Italy and Netherlands and the reference cohort is pre-1971 cohort;

The figures in parentheses are the t-statistics;

Implied year of equality is calculated by $-\alpha/\delta$ for reference group of reference cohort;
by $(-\alpha-\Theta_j)/\delta$ for reference group of other cohort;
by $(-\alpha-\gamma_i)/(\lambda_i+\delta)$ for other group of reference cohort;
by $(-\alpha-\gamma_i-\Theta_j)/(\lambda_i+\delta)$ for other group of other cohort;
All coefficients are obtained by regression results of equation (2);
Source: Based on regressions in Table A4.

29.7 and 30.8 years respectively. Hong Kong and the Philippines are in the middle, needing 31.8 and 36.9 years to catch up with the native born. The slowest ones are Vietnam and China, and their years to equality are 52.8 and 54.8 respectively. Although India and the group of other countries from Asian has relatively low entry effects, since their assimilation rate ranks at the top, the immigrants need the least time to catch up with the native borns. On the contrary, Vietnamese has the smallest disadvantages at entry, but the slower assimilation rate makes them need a longer time to catch up with native born. Chinese male immigrants need the longest time to assimilate into the labour market, at 54.8 years. From the trend of results obtained from 1996 census, we conclude that the assimilation pace plays a significant role. The entry effect can be offset by the assimilation effect, with the results that countries with low entry effects will need fewer years to assimilate.

In the results from the 2001 census, two countries China and Vietnam, seriously shorten their assimilation years. However, India and the Philippines prolong their time to catch up with native borns. The other two groups, Hong Kong and the other countries from East and South Asia increase the assimilation years in a middle range. From the two cross-sectional regressions, not each assimilation trends are not in the same direction, and

the reasons are mainly due to changes in assimilation paces. Thus, the speed of assimilation decides whether male immigrants' assimilation is possible or not.

Table 6 display regression results on pooled data for males. The entry effect and assimilation effect are not significant for the reference group, and most of the investigated groups' disadvantages in entry earnings are between 45 per cent and 55 per cent. The assimilation pace are similar to those obtained from cross-sectional data. After controlling for the assimilation effect, most cohort effects are not significant at normal significant levels, except the cohort 9195. This means that almost all cohorts are faced with the same entry effect, holding other variables constant. This is different from results that assumed the same assimilation effect. Other studies using censuses of the 1970's to the 1990's usually found that the cohort effect plays a significant role. Hence, when they are investigated after controlling for different assimilation effects, why East and South Asian male immigrants have little cohort effect is not clear and needs furtherer research in the future. Thus, most of the years to equality calculated in the Table 6 do not differ across cohorts. The results for the reference group are not meaningful because the entry effect and assimilation effect have the wrong sign. According to Table 6, Vietnam takes the shortest expected years to catch up with native born, at around 35 years, which implies that the assimilation seems to be possible. However, other countries take longer and some seem not to be able to assimilate at all, like China and the Philippines.

Immigrants from Hong Kong and Vietnam perform better than others and the assimilation seems to be attainable. Immigrants from China and the Philippines have

more difficulties to assimilate into the labour market. Other countries from East and South Asia assimilate faster amongst all groups, and because of this, they have relatively shorter assimilation years. Chinese immigrants still experience much more difficulties to catch up with native born, because of their lower entry effect and also their slower assimilation rate. The selective power of immigration policy is various for different Asian countries, Vietnam and Hong Kong look like positively selective groups, but China and the Philippines are not.

Table 7 shows the cross-sectional regression results for women. One difference of results between males and females is that the estimated entry effect and assimilation effect for the reference group of women are significant, which implies that the reference group is also faced with a disadvantage in entry earnings. Female immigrants have a relatively lower entry effect than male immigrants. The Philippines has the highest entry effect, 43.5 per cent, and the second one is China, which is 40.5 per cent. Hong Kong and Vietnam has the smallest ones, and India and other countries from East and South Asia are in the middle range. The reference group has a lower assimilation pace than other groups, and it even takes them 32.6 years to catch up with the native born. The Philippines and China have the fastest assimilation rates, and as a result, they do not take a long time to assimilate. Contrary to those two countries, Hong Kong, India and Vietnam have the slowest assimilation effects; hence they take a longer time to assimilate, especially India, which is expected to take 33.6 years. The best performance is the group of other countries from East and South Asia, which needs 25.7 years.

Table 7 (controlled for the assimilation effect)

Entry and assimilation effects of Canadian immigrants, women, 1996 and 2001

	1996			2001		
Variable	**Entry effect $\gamma * 100$**	**Assimilation Effect $\lambda * 100$**	**Implied Years to equality**	**Entry effect $\gamma * 100$**	**Assimilation Effect $\lambda * 100$**	**Implied Years to equality**
Reference Group	-12.822 (-3.72)	0.393 (0.43)	32.6	-9.972 (-2.61)	0.304 (2.71)	32.8
China	-40.583 (-6.01)	0.414 (3.78)	29.6	-35.892 (-6.10)	0.961 (3.02)	36.3
Hongkong	-20.786 (-3.23)	0.818 (2.14)	27.8	-30.161 (-4.18)	1.190 (3.23)	26.9
India	-29.966 (-4.22)	0.881 (2.35)	33.6	-38.712 (-6.16)	1.267 (4.13)	31.0
Philippines	-43.458 (-7.74)	1.528 (4.66)	29.3	-45.25 (-7.27)	1.506 (4.62)	30.5
Vietnam	-20.807 (-2.03)	0.644 (0.81)	32.5	-50.986 (-4.69)	2.669 (4.15)	20.5
OtherEaSoAsia	-33.100 (-5.02)	1.398 (3.79)	25.7	-57.507 (-9.64)	1.953 (6.42)	29.9
WestAsia	-35.834 (-4.25)	1.391 (3.07)	27.3	-49.738 (-6.91)	1.624 (4.41)	31.0
OtherEurope	-24.332 (-5.34)	0.734 (4.51)	33.0	-27.808 (-5.87)	0. 803 (5.09)	34.1
Africa	-29.376 (-4.06)	1.215 (3.24)	26.3	-25.638 (-3.65)	1.076 (3.23)	25.8
OtherAmerica	-26.698 (-5.59)	0.808 (3.92)	33.0	-39.69 (-7.67)	0. 810 (4.09)	44.6
restWorld	30.779 (1.24)	-1.314 (-1.29)	19.4	-52.346 (-2.27)	2.044 (2.34)	26.5

NOTES

The reference region of origin is the United States, United Kingdom, Germany, Italy and Netherlands and its assimilation effect is obtained by $\delta * 100$;

The figures in parentheses are the t-statistics.

Implied year of equality is calculated by $-\alpha/\delta$ for the reference region of origin,

by $(-\alpha-\gamma_i)/(\lambda_i+\delta)$for other groups,

which uses coefficients obtained by equation(2);

Source: Based on regressions in Table A4

In the results from the 2001census, all of groups, except China and other countries from East and South Asia, shorten their assimilation time. The reference group almost keeps the assimilation time unchanged. One interesting result is that only China shortens its entry effect, the other groups having an increased entry effect compared with results of the 1996 census. However, based on assimilation rate, only China has a decline, while the Philippines keeps a similar level, and the other groups have a dramatic increase. Vietnam experiences the shortest assimilation years, 20.5, and the second shortest one is Hong Kong which uses 26.9 years to catch up with native borns. India and the Philippines also decline their years to equality. Other countries from East and South Asia increase their assimilation years a bit, but China takes an additional six years to assimilate. The results from cross-sectional data arrive at the same conclusion as that of males: that the assimilation effect is the major force that determines whether immigrants can assimilate completely or not into the labour market. It also implies that most recent female immigrants perform relatively better than males in the labour market, especially those from Vietnam and Hong Kong.

The last table, Table 8, shows the results for women from regressing on pooled data. Unlike the cross-sectional results, the estimated entry and assimilation effects for the reference are no longer significant at normal confidence level, meaning that the reference group has no disadvantage. The cohort effects are more powerful for women than for men, half of the cohort effects being significant at the 5% confidence level. Compared to Table 7, most of groups' entry effects in Table 8 are between 23 per cent and 35 per cent, except

Table 8 (controlled for assimilation effect)

Entry, assimilation and cohort effects of Canadian immigrants, women, pooled data

			Cohort Effect Θ * 100					
			Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
			-0.161	0.338	0.665	-6.191	-20.382	-16.968
			(-0.08)	(0.14)	(0.22)	(-1.82)	(-5.16)	(-3.67)
			Implied years to equality					
Variable	**Entry effect γ * 100**	**Assimilation Effect λ* 100**	Cohort Pre71	Cohort 7175	Cohort 7680	Cohort 8185	Cohort 8690	Cohort 9195	Cohort 9600
Reference Group	-4.601 (-1.04)	0.157 (1.31)	29.3	30.3	27.2	25.1	68.7	159.1	137.4
China	-24.690 (-5.34)	0.604 (2.43)	38.5	38.7	38.0	37.6	46.6	65.3	60.8
Hongkong	-14.471 (-2.88)	0.468 (1.73)	30.5	30.8	30.0	29.5	40.4	63.1	57.7
India	-22.769 (-4.65)	0.529 (2.13)	39.9	40.1	39.4	38.9	48.9	69.6	64.6
Philippines	-31.521 (-7.07)	0.905 (3.74)	34.0	34.2	33.7	33.4	39.8	53.2	50.0
Vietnam	-22.867 (-3.05)	0.953 (1.95)	24.7	24.9	24.4	24.1	30.3	43.1	40.0
OtherEaSoAsia	-34.937 (-7.55)	1.128 (4.61)	30.8	30.9	30.5	30.3	35.6	46.6	44.0
WestAsia	-32.785 (-5.86)	1.035 (3.56)	31.4	31.5	31.1	30.8	36.6	48.5	45.8
OtherEurope	-18.298 (-5.36)	0.516 (4.39)	34.0	34.3	33.5	33.0	43.2	64.3	59.2
Africa	-15.536 (-2.97)	0.630 (2.45)	25.6	25.8	25.2	24.7	33.5	51.5	47.1
OtherAmerica	-22.713 (-6.07)	0.299 (1.93)	59.9	60.3	59.2	58.4	73.5	104.6	97.1
restWorld	-9.581 (-0.57)	0.404 (0.61)	25.3	25.6	24.7	24.1	36.3	61.6	55.5

NOTES:

The reference group is the United States, United Kingdom, Germany, Italy and Netherlands and the reference cohort is pre-1971 cohort;

The figures in parentheses are the t-statistics;

Implied year of equality is calculated by $-\alpha/\delta$ for reference group of reference cohort;

by $(-\alpha-\Theta_j)/\delta$ for reference group of other cohort;
by $(-\alpha-\gamma_i)/(\lambda_i+\delta)$ for other group of reference cohort;
by $(-\alpha-\gamma_i-\Theta_j)/(\lambda_i+\delta)$ for other group of other cohort;
All coefficients are obtained by regression results of equation (2);
Source: Based on regressions in Table A4.

Hong Kong, which has the lowest one, at 14.5 per cent. China, Hong Kong and India have the lowest assimilation effect, around 0.4 per cent per year to 0.6 per cent per year, and the Philippines, Vietnam and the other countries from other East and South Asia have the higher assimilation effect, around 1.0 per cent per year. As a result, the female immigrants from Vietnam and Hong Kong assimilate the fastest. However, India and China experience a long assimilation years and they are viewed as not being able to assimilate completely.

In a conclusion, in results from regressions on cross sectional data, most groups of female immigrants need fewer years to assimilate in the 2001 census than in the 1996 census. Consistent with the former results based on the same assimilation effect, cohort effects still partly dominate the assimilation patterns of female immigrants. Immigrants who arrived after the mid-1980, as expected in many earlier researches, face more difficulties to assimilate. But as a whole, female immigrants do not have such a large disadvantage in earnings as males compared to the native born. One main reason is that native females do not perform as well as native males, making the gap between native females and immigrant females easier to close. In spite of that, complete assimilation is still difficult to attain for females.

V Conclusion

This paper mainly investigates five groups of immigrants from countries in East and South Asia, both males and females. Summarizing the results obtained from aforementioned tables, there are several conclusions.

In the cross-sectional regressions, nearly all five groups of male immigrants from East and South Asia need more than half century to assimilate, thus, when one does not consider the cohort effect, male immigrants are viewed as not being able to catch up with the native born. In results of regression on pooled data which considers cohort effects, male immigrants need a longer time to assimilate into the labour market and the more recent cohorts face more difficulties compared with earlier cohorts. However, after controlling for different assimilation effects, the assimilation years shorten for both cross-sectional and pooled data. The groups with the best performances, Vietnam and Hong Kong, need around 30 years to catch up with the native borns in cross-sectional regressions and around 35 years in pooled data regressions. In the latter regressions, most cohort effects are not significant at normal confidence levels. Like conclusions from other immigration studies, the full assimilation for male from East and South Asia is not easily attained.

Female immigrants, in results obtained from cross-sectional data, need shorter time to assimilate than males from the same areas. The shortest time for female immigrants to assimilate is around 20 years, which does not imply that the assimilation is absolutely unattainable. However, when considering different cohort effects, the more recent cohorts

experience harder assimilation, especially after cohort 8185. The assimilation years double and complete assimilation becomes nearly impossible. After controlling for the different assimilation rates, the times spent in catching up with native females are shortened for both types of data sets and they also follow the trend aforementioned.

For both men and women, the large disadvantages in entry effect could be offset by a high assimilation pace; thus, the assimilation effect plays a significant role in investigating immigrant's earnings.

When using the 1996 census to investigate the immigrants from Mainland China and Hong Kong in the labour market in Toronto and Vancouver, Song (2004) found out that Hong Kong immigrants perform better, especially female immigrants. Similar results are also obtained in this paper. Immigrants from Vietnam and Hong Kong perform better than others. This is perhaps because early immigrants from Vietnam were university students and middle class people. Because they come from a former French colony, Vietnamese are more likely to grasp French and find jobs in Canada. Hong Kong immigrants have a strong background related to Great Britain. Hence, their educational qualities, language abilities, adaptabilities to the Canadian society and motivations seem to be better than those of other groups, for instance the Mainland Chinese.

Overall, the results in this paper are consistence with conclusions of most previous researches on immigrants. Assimilation is difficult to attain for both males and females coming from East and South Asia.

Appendix A Variable description

Lnwage: Logarithms of wages and salaries in previous year of Censuses

Educ: Education in years

Exp: Work experience in years, calculated by age - 6 - schooling

Married: Dummy variable for historical comparability indicator of marital status

Wks0113: Dummy variables for 1 to 13 weeks worked in previous year of Censuses (reference: 49-52 weeks)

Wks1426: Dummy variables for 14 to 26 weeks worked in previous year of Censuses (reference: 49-52 weeks)

Wks2739: Dummy variables for 27 to 39 weeks worked in previous year of Censuses (reference: 49-52 weeks)

Wks4048: Dummy variables for 40 to 48 weeks worked in previous year of Censuses (reference: 49-52 weeks)

Hrs0119: Dummy variables for 1 to 19 hours worked for pay or in self-employment in previous week of Censuses (reference: 40-44 weeks)

Hrs2029: Dummy variables for 20 to 29 hours worked for pay or in self-employment in previous week of Censuses (reference: 40-44 weeks)

Hrs3034: Dummy variables for 30 to 34 hours worked for pay or in self-employment in previous week of Censuses (reference: 40-44 weeks)

Hrs3539: Dummy variables for 35 to 39 hours worked for pay or in self-employment in previous week of Censuses (reference: 40-44 weeks)

Hrs4549: Dummy variables for 45 to 49 hours worked for pay or in self-employment in previous week of Censuses (reference: 40-44 weeks)

Index2001: Dummy variables for observations taken from 2001 census

Ysm: years since immigration

Immig: Dummy variables for individuals born outside Canada

China: Dummy variables for individuals born in China (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

Hong Kong: Dummy variables for individuals born in Hong Kong (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

India: Dummy variables for individuals born in India (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

Philippines: Dummy variables for individuals born in the Philippines (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

Vietnam: Dummy variables for individuals born in Vietnam (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

WestAsia: Dummy variables for individuals born in West Central Asian and the Middle East (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

OtherEaSoAsia: Dummy variables for individuals born in other countries of Eastern and Southern Asia (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

OtherEurope: Dummy variables for individuals born in European countries except United

Kingdom, Germany, Italy, Netherlands (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

Africa: Dummy variables for individuals born in countries in Africa (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

OtherAmerica: Dummy variables for individuals born in Northern and Southern America except Canada and United States (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

restWorld: Dummy variables for individuals born in countries except all aforementioned countries (reference: the United States, United Kingdom, Germany, Italy, Netherlands)

Nontoronto: Dummy variables for immigrants who do not live in Toronto (reference: immigrants who live in Toronto)

coh7175: Dummy variables for cohorts of immigrants who arrived between 1971 and 1975 (reference: immigrants who arrived before 1971)

coh7175: Dummy variables for cohorts of immigrants who arrived between 1971 and 1975 (reference: immigrants who arrived before 1971)

coh7680: Dummy variables for cohorts of immigrants who arrived between 1976 and 1980 (reference: immigrants who arrived before 1971)

coh8185: Dummy variables for cohorts of immigrants who arrived between 1981 and 1985 (reference: immigrants who arrived before 1971)

coh8690: Dummy variables for cohorts of immigrants who arrived between 1986 and 1990 (reference: immigrants who arrived before 1971)

coh9195: Dummy variables for cohorts of immigrants who arrived between 1991 and 1995 (reference: immigrants who arrived before 1971)

coh9600: Dummy variables for cohorts of immigrants who arrived between 1996 and 2000 (reference: immigrants who arrived before 1971)

Table A1

Descriptive Statistics (mean and standard deviation in parentheses when appropriate)

	Men			*Women*		
	1996	*2001*	*Pool*	*1996*	*2001*	*Pool*
Variable	*Mean*	*Mean*	*Mean*	*Mean*	*Mean*	*Mean*
lnwage	10.2765	10.46317	10.37245	9.78038	9.97231	9.88057
	(1.00329)	(0.98500)	(0.99830)	(1.10942)	(1.09042)	(1.10371)
educ	13.43421	13.79992	13.62217	13.59469	13.97961	13.79563
	(3.13191)	(2.98786)	(3.06417)	(2.90285)	(2.79648)	(2.85429)
exp	21.57140	22.14854	21.86803	20.97890	21.51356	21.25801
	(11.09569)	(10.93778)	(11.01855)	(10.88684)	(10.79746)	(10.84351)
expsq	588.43770	610.19100	599.61806	558.63544	579.41624	569.48379
married	0.75174	0.74443	0.74798	0.72639	0.71343	0.71962
wks0113	0.03376	0.02265	0.02805	0.05407	0.04330	0.04845
wks1426	0.06010	0.04266	0.05114	0.08315	0.07236	0.07752
wks2739	0.05952	0.04598	0.05256	0.06843	0.05988	0.06397
wks4048	0.11225	0.12507	0.11884	0.12560	0.13516	0.13059
hrs0119	0.02640	0.02068	0.02346	0.08785	0.06522	0.07604
hrs2029	0.02484	0.02150	0.02312	0.09566	0.08706	0.09117
hrs3034	0.02510	0.02043	0.02270	0.05921	0.06408	0.06175
hrs3539	0.08707	0.07925	0.08305	0.18487	0.17032	0.17727
hrs4549	0.09781	0.09332	0.09550	0.05116	0.05659	0.05400
index2001			0.51396			0.52204
ysm	6.27731	6.47591	6.37939	6.00658	6.34805	6.18484
	(11.84917)	(2.19526)	(12.02865)	(11.50527)	(11.97187)	(11.75235)
immig	0.30413	0.30809	0.30617	0.29402	0.30509	0.29980
China	0.00989	0.01361	0.01180	0.01016	0.01425	0.01230
Hongkong	0.01206	0.01232	0.01219	0.01366	0.01390	0.01379
India	0.01552	0.02013	0.01789	0.01329	0.01806	0.01578
Philippines	0.01011	0.01292	0.01155	0.01758	0.01939	0.01853
Vietnam	0.00881	0.00956	0.00920	0.00664	0.00836	0.00754
OtherEaSoAsia	0.01791	0.02565	0.02188	0.01381	0.01993	0.01700
WestAsia	0.01106	0.01537	0.01328	0.00682	0.01071	0.00885
OtherEurope	0.06390	0.06121	0.06252	0.05715	0.05752	0.05734
Africa	0.01403	0.01618	0.01513	0.01071	0.01403	0.01244
OtherAmerica	0.04276	0.04278	0.04277	0.05006	0.05193	0.05103
restWorld	0.00137	0.00126	0.00131	0.00112	0.00129	0.00121
nonToronto	0.59364	0.58042	0.58684	0.58641	0.57155	0.57865
coh7175			0.04316			0.04406
coh7680			0.02973			0.03072
coh8185			0.02432			0.02546
coh8690			0.04599			0.04465
coh9195			0.04759			0.04794
coh9600			0.01932			0.01755
Sample size:	60033	63482	123515	54537	59566	114103

Table A2
Regression results, basic model

	Men			*Women*		
	1996	*2001*	*Pooled*	*1996*	*2001*	*Pooled*
Variable	*Parameter Estimate*	*Parameter Estimate*	*Parameter Estimate*	*Parameter Estimate*	*Parameter Estimate*	*Parameter Estimate*
Intercept	9.15581	9.35397	9.19860	8.88471	8.95308	8.86535
	(389.28)	(377.68)	(537.22)	(312.63)	(310.21)	(437.90)
educ	0.05978	0.06125	0.06043	0.07936	0.08409	0.08190
	(48.77)	(47.23)	(67.69)	(53.88)	(56.02)	(77.88)
exp	0.03592	0.02852	0.03183	0.02184	0.02203	0.02134
	(29.69)	(22.70)	(36.46)	(16.53)	(16.58)	(22.75)
expsq	-0.00051252	-0.00043421	-0.00046474	-0.00029389	-0.00031715	-0.00029067
	(-20.96)	(-16.82)	(-26.11)	(-10.63)	(-11.22)	(-14.68)
married	0.22398	0.23425	0.23049	0.07007	0.06800	0.06914
	(27.53)	(28.42)	(39.77)	(8.33)	(8.25)	(11.74)
wks0113	-2.04753	-1.86696	-1.96717	-2.21321	-2.02623	-2.11990
	(-109.79)	(-80.89)	(-134.77)	(-133.37)	(-111.44)	(-172.58)
wks1426	-1.02415	-0.95679	-0.99328	-1.04184	-0.99285	-1.01329
	(-71.62)	(-55.99)	(-90.14)	(-76.30)	(-69.04)	(-102.18)
wks2739	-0.60954	-0.54739	-0.57986	-0.61166	-0.61156	-0.60917
	(-42.72)	(-33.25)	(-53.54)	(-41.20)	(-39.21)	(-56.58)
wks4048	-0.19486	-0.17031	-0.18079	-0.26451	-0.21982	-0.23871
	(-18.25)	(-16.33)	(-24.23)	(-23.32)	(-20.18)	(-30.39)
hrs0119	-0.59878	-0.67610	-0.63429	-0.73006	-0.73534	-0.73282
	(-28.62)	(-28.01)	(-39.94)	(-53.97)	(-48.22)	(-72.28)
hrs2029	-0.52189	-0.59546	-0.55681	-0.44404	-0.49660	-0.46980
	(-24.32)	(-25.20)	(-34.93)	(-34.22)	(-37.16)	(-50.43)
hrs3034	-0.36490	-0.41332	-0.38640	-0.25759	-0.30030	-0.28072
	(-17.14)	(-17.12)	(-24.11)	(-16.16)	(-19.69)	(-25.49)
hrs3539	-0.01144	-0.01821	-0.01410	0.08534	0.05037	0.06637
	(-0.96)	(-1.43)	(-1.62)	(8.51)	(4.97)	(9.31)
hrs4549	0.10145	0.09787	0.09999	0.15971	0.16224	0.16043
	(8.99)	(8.30)	(12.24)	(9.36)	(10.08)	(13.71)
index2001			0.11706			0.11078
			(23.30)			(20.20)
ysm	0.00915	0.00678	0.00300	0.00987	0.01046	0.00347
	(15.66)	(11.70)	(2.96)	(14.87)	(16.70)	(3.04)
immig	-0.26995	-0.20942	-0.07880	-0.30126	-0.33637	-0.09814
	(-13.08)	(-9.23)	(-2.04)	(-13.14)	(-14.00)	(-2.28)
China	-0.36315	-0.30675	-0.32671	-0.12738	-0.09657	-0.10083

	(-10.00)	(-9.08)	(-13.28)	(-3.20)	(-2.71)	(-3.81)
Hongkong	-0.15110	-0.14370	-0.16221	-0.00727	0.00338	-0.01990
	(-4.49)	(-4.17)	(-6.70)	(-0.20)	(0.10)	(-0.79)
India	-0.18558	-0.18837	-0.19950	-0.08341	-0.07224	-0.09269
	(-6.18)	(-6.54)	(-9.61)	(-2.36)	(-2.26)	(-3.92)
Philippines	-0.27155	-0.24845	-0.26343	-0.15620	-0.11111	-0.13412
	(-7.52)	(-7.28)	(-10.62)	(-4.81)	(-3.53)	(-5.93)
Vietnam	-0.19885	-0.07299	-0.17250	-0.02738	0.01368	-0.04393
	(-5.19)	(-1.92)	(-6.26)	(-0.57)	(0.32)	(-1.35)
OtherEaSoAsia	-0.29092	-0.30167	-0.29811	-0.05019	-0.17469	-0.13418
	(-10.05)	(-11.13)	(-15.15)	(-1.43)	(-5.61)	(-5.80)
WestAsia	-0.28828	-0.23079	-0.25573	-0.07053	-0.13405	-0.11858
	(-8.32)	(-7.24)	(-10.96)	(-1.50)	(-3.43)	(-3.98)
OtherEurope	-0.03225	-0.03117	-0.03948	-0.03898	-0.02728	-0.03861
	(-1.84)	(-1.60)	(-3.02)	(-1.93)	(-1.29)	(-2.64)
Africa	-0.20732	-0.20197	-0.21402	-0.02874	0.03455	-0.00347
	(-6.62)	(-6.51)	(-9.69)	(-0.74)	(0.99)	(-0.13)
OtherAmerica	-0.16434	-0.20443	-0.21098	-0.05789	-0.14620	-0.13215
	(-7.87)	(-9.28_	(-13.70)	(-2.62)	(-6.54)	(-8.30)
restWorld	0.20094	0.09629	0.13474	0.06807	0.02103	0.02035
	(2.22)	(1.00)	(2.04)	(0.62)	(0.21)	(0.27)
nonToronto	-0.08206	-0.10477	-0.09339	-0.18346	-0.21351	0.00176
	(-11.18)	(-13.83)	(-17.69)	(-22.53)	(-26.26)	(0.09)
coh7175			0.03649			0.00088005
			(2.04)			(0.04)
coh7680			0.00034674			-0.01037
			(0.02)			(-0.35)
coh8185			-0.00159			-0.10369
			(-0.06)			(-3.18)
coh8690			-0.08854			-0.26839
			(-3.00)			(-7.24)
coh9195			-0.21052			-0.25011
			(-6.28)			(-5.76)
coh9600			-0.12403			-0.19930
			(-3.19)			(-34.63)
R^2	0.3479	0.2471	0.3029	0.4055	0.3368	0.3763
N	60033	63482	123515	54537	59566	114103

NOTES:

The figures in parentheses are the t-statistics.

Table A3

Descriptive statistics, controlling for assimilation effect (mean and standard deviation in parentheses when appropriate)

	Men			*Women*		
Variable	*1996*	*2001*	*pool*	*1996*	*2001*	*pool*
lnwage	10.27651	10.46317	10.37245	9.78038	9.97231	9.88057
	(1.00329)	(0.985)	(0.9983)	(1.10942)	(1.09042)	(1.10371)
educ	13.43421	13.79992	13.62217	13.59469	13.97961	13.79563
	(3.13191)	(2.98786)	(3.06417)	(2.90285)	(2.79648)	(2.85429)
exp	21.57140	22.14854	21.86803	20.97890	21.51356	21.25801
	(11.09569)	(10.93778)	(11.01855)	(10.88684)	(10.79746)	(10.84351)
expsq	588.43770	610.19100	599.61806	558.63544	579.41624	569.48379
married	0.75174	0.74443	0.74798	0.72639	0.71343	0.71962
wks0113	0.03376	0.02265	0.02805	0.05407	0.04330	0.04845
wks1426	0.06010	0.04266	0.05114	0.08315	0.07236	0.07752
wks2739	0.05952	0.04598	0.05256	0.06843	0.05988	0.06397
wks4048	0.11225	0.12507	0.11884	0.12560	0.13516	0.13059
hrs0119	0.02640	0.02068	0.02346	0.08785	0.06522	0.07604
hrs2029	0.02484	0.02150	0.02312	0.09566	0.08706	0.09117
hrs3034	0.02510	0.02043	0.02270	0.05921	0.06408	0.06175
hrs3539	0.08707	0.07925	0.08305	0.18487	0.17032	0.17727
hrs4549	0.09781	0.09332	0.09550	0.05116	0.05659	0.05400
index2001			0.51396			0.52204
ysm	6.27731	6.47591	6.37939	6.00658	6.34805	6.18484
	(11.84917)	(12.19526)	(12.02865)	(11.50527)	(11.97187)	(11.75235)
immig	0.30413	0.30809	0.30617	0.29402	0.30509	0.29980
China	0.00989	0.01361	0.01180	0.01016	0.01425	0.01230
Hongkong	0.01206	0.01232	0.01219	0.01366	0.01390	0.01379
India	0.01552	0.02013	0.01789	0.01329	0.01806	0.01578
Philippines	0.01011	0.01292	0.01155	0.01758	0.01939	0.01853
Vietnam	0.00881	0.00956	0.00920	0.00664	0.00836	0.00754
OtherEaSoAsia	0.01791	0.02565	0.02188	0.01381	0.01993	0.01700
WestAsia	0.01106	0.01537	0.01328	0.00682	0.01071	0.00885
OtherEurope	0.06390	0.06121	0.06252	0.05715	0.05752	0.05734
Africa	0.01403	0.01618	0.01513	0.01071	0.01403	0.01244
OtherAmerica	0.04276	0.04278	0.04277	0.05006	0.05193	0.05103
restWorld	0.00137	0.00126	0.00131	0.00112	0.00129	0.00121
ysmchina	0.12779	0.16220	0.14547	0.12916	0.15814	0.14429
ysmHongkong	0.14699	0.19188	0.17006	0.16646	0.20993	0.18915
ysmIndia	0.22650	0.29711	0.26279	0.19791	0.26523	0.23305
ysmPhilippines	0.12420	0.17729	0.15149	0.19890	0.26549	0.23366

ysmVietnam	0.10389	0.15685	0.13111	0.07207	0.12345	0.09889
ysmWestAsia	0.14070	0.21030	0.17647	0.09797	0.15281	0.12660
ysmOtherEaSoAsia	0.20849	0.32036	0.26599	0.18433	0.26769	0.22785
ysmOtherEurope	1.38306	1.33941	1.36063	1.23324	1.23922	1.23636
ysmAfrica	0.19781	0.24751	0.22335	0.15853	0.22583	0.19366
ysmOtherAmerica	0.68586	0.80629	0.74776	0.83188	0.98942	0.91412
ysmrestWorld	0.02493	0.02739	0.02620	0.02419	0.03050	0.02748
coh7175			0.04316			0.04406
coh7680			0.02973			0.03072
coh8185			0.02432			0.02546
coh8690			0.04599			0.04465
coh9195			0.04759			0.04794
coh9600			0.01932			0.01755
nonToronto	0.59364	0.58042	0.58684	0.58641	0.57155	0.57865
Sample size	60033	63482	123515	54537	59566	114103

Table A4	**Regression results, controlling for the assimilation effect**					
	Men			*Women*		
Variable	*1996*	*2001*	*pool*	*1996*	*2001*	*pool*
Intercept	9.17186	9.36209	9.21104	8.89585	8.96652	8.87150
	(389.55)	(377.21)	(535.66)	(312.15)	(309.85)	(436.03)
educ	0.05874	0.06079	0.05984	0.07867	0.08342	0.08159
	(47.83)	(46.77)	(66.80)	(53.23)	(55.43)	(77.26)
exp	0.03564	0.02830	0.03178	0.02170	0.02168	0.02136
	(29.47)	(22.52)	(36.39)	(16.41)	(16.31)	(22.77)
expsq	-0.00050823	-0.00042979	-0.00046482	-0.00029151	-0.00031012	-0.00029172
	(-20.80)	(-16.65)	(-26.12)	(-10.54)	(-10.97)	(-14.73)
married	0.22561	0.23511	0.23064	0.06999	0.06777	0.06904
	(27.75)	(28.54)	(39.80)	(8.32)	(8.22)	(11.72)
wks0113	-2.03941	-1.86032	-1.96396	-2.20891	-2.02301	-2.11859
	(-109.42)	(-80.62)	(-134.59)	(-133.06)	(-111.29)	(-172.46)
wks1426	-1.01949	-0.95255	-0.99086	-1.03934	-0.98996	-1.01253
	(-71.36)	(-55.75)	(-89.94)	(-76.12)	(-68.85)	(-102.10)
wks2739	-0.60556	-0.54446	-0.57823	-0.61013	-0.60956	-0.60861
	(-42.48)	(-33.09)	(-53.42)	(-41.11)	(-39.09)	(-56.53)
wks4048	-0.19243	-0.16904	-0.18019	-0.26304	-0.21771	-0.23810
	(-18.04)	(-16.22)	(-24.16)	(-23.19)	(-19.99)	(-30.31)
hrs0119	-0.59604	-0.67412	-0.63342	-0.73055	-0.73565	-0.73333
	(-28.52)	(-27.95)	(-39.91)	(-54.02)	(-48.27)	(-72.33)
hrs2029	-0.51936	-0.59620	-0.55616	-0.44478	-0.49714	-0.47040
	(-24.23)	(-25.24)	(-34.91)	(-34.29)	(-37.22)	(-50.50)
hrs3034	-0.35995	-0.41094	-0.38408	-0.25698	-0.30074	-0.28079
	(-16.93)	(-17.04)	(-23.97)	(-16.13)	(-19.73)	(-25.50)
hrs3539	-0.01320	-0.01945	-0.01507	0.08449	0.05026	0.06646
	(-1.11)	(-1.53)	(-1.73)	(8.43)	(4.96)	(9.32)
hrs4549	0.10059	0.09740	0.09917	0.16048	0.16262	0.16070
	(8.92)	(8.27)	(12.15)	(9.41)	(10.11)	(13.73)
index2001			0.11153			0.10806
			(22.05)			(19.58)
ysm	0.00043018	-0.00088995	-0.00026639	0.00393	0.00304	0.00157
	(0.43)	(-0.84)	(-0.25)	(3.56)	(2.71)	(1.31)
immig	-0.00789	0.04288	0.01377	-0.12822	-0.09972	-0.04601
	(-0.25)	(1.16)	(0.35)	(-3.72)	(-2.61)	(-1.04)
China	-0.66702	-0.62905	-0.60069	-0.40583	-0.35892	-0.24690
	(-11.15)	(-11.00)	(-13.94)	(-6.01)	(-6.10)	(-5.34)
Hongkong	-0.49296	-0.50140	-0.44910	-0.20786	-0.30161	-0.14471
	(-8.07)	(-7.09)	(-9.29)	(-3.23)	(-4.18)	(-2.88)

India	-0.62415	-0.44553	-0.46963	-0.29966	-0.38712	-0.22769
	(-10.75)	(-7.91)	(-11.03)	(-4.22)	(-6.16)	(-4.65)
Philippines	-0.63463	-0.53831	-0.52381	-0.43458	-0.45250	-0.31521
	(-9.85)	(-8.20)	(-10.83)	(-7.74)	(-7.27)	(-7.07)
Vietnam	-0.45990	-0.43324	-0.46105	-0.20807	-0.50986	-0.22867
	(-4.91)	(-3.75)	(-6.42)	(-2.03)	(-4.69)	(-3.05)
OtherEaSoAsia	-0.72327	-0.67127	-0.63884	-0.33100	-0.57507	-0.34937
	(-13.87)	(-12.96)	(-16.21)	(-5.02)	(-9.64)	(-7.55)
WestAsia	-0.61560	-0.57118	-0.54634	-0.35834	-0.49738	-0.32785
	(-10.22)	(-9.58)	(-12.37)	(-4.25)	(-6.91)	(-5.86)
OtherEurope	-0.31160	-0.30856	-0.28364	-0.24332	-0.27808	-0.18298
	(-7.71)	(-6.84)	(-8.99)	(-5.34)	(-5.87)	(-5.36)
Africa	-0.69505	-0.62518	-0.61080	-0.29376	-0.25638	-0.15536
	(-12.03)	(-10.21)	(-13.80)	(-4.06)	(-3.65)	(-2.97)
OtherAmerica	-0.48128	-0.45769	-0.42627	-0.26698	-0.39690	-0.22713
	(-10.76)	(-8.92)	(-11.80)	(-5.59)	(-7.67)	(-6.07)
restWorld	0.04259	-0.06632	0.03258	0.30779	-0.52346	-0.09581
	(0.26)	(-0.32)	(0.25)	(1.24)	(-2.27)	(-0.57)
ysmchina	0.01188	0.01349	0.01104	0.01414	0.00961	0.00604
	(3.79)	(4.60)	(5.01)	(3.78)	(3.02)	(2.43)
ysmHongkong	0.01532	0.01443	0.01233	0.00818	0.01190	0.00468
	(4.21)	(4.13)	(4.79)	(2.14)	(3.23)	(1.73)
ysmIndia	0.02084	0.00796	0.01080	0.00881	0.01267	0.00529
	(7.01)	(3.06)	(5.24)	(2.35)	(4.13)	(2.13)
ysmPhilippines	0.01697	0.01040	0.01044	0.01528	0.01506	0.00905
	(4.43)	(3.00)	(3.90)	(4.66)	(4.62)	(3.74)
ysmVietnam	0.00843	0.01418	0.01309	0.00644	0.02669	0.00953
	(1.22)	(2.21)	(2.94)	(0.81)	(4.15)	(1.95)
ysmWestAsia	0.01381	0.01407	0.01226	0.01391	0.01624	0.01035
	(4.14)	(4.73)	(5.39)	(3.07)	(4.41)	(3.56)
ysmOtherEaSoAsia	0.02330	0.01701	0.01692	0.01398	0.01953	0.01128
	(7.70)	(6.58)	(8.12)	(3.79)	(6.42)	(4.61)
ysmOtherEurope	0.00945	0.00878	0.00824	0.00734	0.00803	0.00516
	(6.73)	(6.01)	(7.79)	(4.51)	(5.09)	(4.39)
ysmAfrica	0.02477	0.01884	0.01935	0.01215	0.01076	0.00630
	(8.32)	(6.54)	(8.96)	(3.24)	(3.23)	(2.45)
ysmOtherAmerica	0.01208	0.00769	0.00750	0.00808	0.00810	0.00299
	(6.14)	(3.88)	(4.97)	(3.92)	(4.09)	(1.93)
ysmrestWorld	0.00300	0.00353	0.00149	-0.01314	0.02044	0.00404
	(0.42)	(0.43)	(0.28)	(-1.29)	(2.34)	(0.61)
coh7175			0.02742			-0.00161

			(1.53)			(-0.08)
coh7680			0.00872			0.00338
			(0.38)			(0.14)
coh8185			0.03958			0.00665
			(1.45)			(0.22)
coh8690			-0.00148			-0.06191
			(-0.05)			(-1.82)
coh9195			-0.08448			-0.20382
			(-2.36)			(-5.16)
coh9600			0.03231			-0.16968
			(0.78)			(-3.67)
nonToronto	-0.08317	-0.10572	-0.09451	-0.18419	-0.21498	-0.19995
	(-11.34)	(-13.96)	(-17.90)	(-22.63)	(-26.45)	(-34.74)
N	60033	63482	123515	54537	59566	114103
R^2	0.3497	0.2483	0.3038	0.4062	0.3396	0.3765

NOTES:

The figures in parentheses are the t-statistics.

References

1. Aydemir, Abdurrahman and Skuterud, Mikal (2005), 'Explaining the deteriorating entry earnings of Canada's immigrant cohorts, 1966-2000,' *Canadian Journal of Economics, Vol. 38, 641-672.*
2. Baker, M. and Benjamin, D. (1994), "The Performance of Immigrants in the Canadian Labour Market," *Journal of Labour Economics, Vol. 12, 369-405*
3. Bloom, D.E., Grenier, G and Gunderson, M.K. (1995), "The Changing Labour Market Position of Canadian Immigrants," *Canadian Journal of Economics, Vol. 28, 987-1005.*
4. Borjas, George J. (1985), "Assimilation, Changes in Cohort Quality, and the Earnings of Immigrants", *Journal of Labour Economics, Vol. 3, 463-48*
5. Buchignani, Norman, Indra, Doreen M., Srivastiva, Ram (1985), *Continuous Journey—A Social History of South Asians in Canada* (Toronto: McClelland and Strewart Ltd.)
6. Chiswick, Barry R. (1978), "The Effect of Americanization on the Earnings of Foreign-born Men", *Journal of Political Economy, Vol. 86, 897-921*
7. Dorais, Louis-Jacques (2000), *The Cambodians, Laotians and Vietnamese in Canada*, Canada's Ethnic Group Series Booklet No. 28, ed. Roberto Perin (Ottawa: The Canadian Historical Association)
8. Government of Canada (2000), Canada's Digital Collections; Canada Heirloom Series, Volume 7, Countries: Philippines (http://collections.ic.gc.ca/heirloom_series/volume7/countries/philippines.html)
9. Grant, Mary L. (1999), "Evidence of New Immigrant Assimilation in Canada", *Canadian Journal of Economics, Vol. 32, 930-955*
10. Halli, Shivalingappa S. (1987), *How immigrants Status Affects Fertility—Asian Groups in Canada*, (Connecticut: Greenwood Press, Inc.)
11. Li, Peter S. (1998), *The Chinese in Canada* (Second edition)(Oxford: Oxford

University Press)

12. Song, Qunxia (2004), "The Performance of Immigrants from Mainland China and Hong Kong in the Toronto and Vancouver Labour Market", Major paper of the M.A degree of the Department of Economics, University of Ottawa