The Economic Position of First and Second Generation Immigrants in Canada

by

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Abstract

This paper focuses on the economic performances of the first-generation and second-generation immigrants in Canada using data from the 2001 Census. The results are consistent with the conclusions of previous studies. They show that both male and female first-generation immigrants, especially the recent cohorts of immigrants, have important earnings disadvantages compared to their native-born counterparts. The reasons are that most recent immigrants are from Asian countries, have languages other than English or French, or have cultural and educational backgrounds that are different from those in Canada. Based on region of origin, the first-generation immigrants from the United States and Europe perform better than those from Asia, Africa, Latin America and other countries. Second-generation immigrant men and women have better earnings profiles than the native-born individuals with both parents born in Canada. In general, those with both foreign-born parents perform slightly better than those with only a foreign-born mother or only a foreign-born father. The positive effect on earnings for the second-generation immigrants from Asia, Africa, Latin America and other countries is smaller and less significant than the one for the second-generation immigrants from the United States and Europe. One reason is that more than 90 percent of the second-generation immigrants have United States or European parentage, since the earlier immigrant cohorts were mainly from those regions.

Introduction

In 2001, Canada admitted more than 250,000 immigrants, and nearly 70% of the total population growth resulted from positive net migration. By 2026, it is anticipated that Canada's population will grow solely through the arrival of immigrants (Citizenship and Immigration Canada, 2002). Immigration contributes not only to the growth of the population, but also to the growth of the Canadian economy. In addition, immigration has played a major role in shaping the character of the Canadian society. According to the 2001 census, 5.4 million people, or 18.4% of the total population, were born outside Canada. This group is referred to as first-generation immigrants (Statistics Canada, 2003). Those people chose to migrate to Canada because it was perceived as a land of opportunity, or because they wanted to escape poverty, oppression or war. Nevertheless, many of them have to face lots of difficulties and challenges because they come to Canada as foreigners. Once they have settled in Canada, many immigrants form a family and have children who are native-born Canadians. This group constitutes the second-generation immigrants. Although the first- generation immigrants have difficulties compared to the native-born individuals, they hope that their children will succeed. The second-generation immigrants account for a significant proportion of the adult population in Canada. In 2001, the proportion of the Canadian-born individuals with at least one foreign-born parent was about 7% (Statistics Canada, 2005).

There are a lot of studies on the economic performance of first-generation immigrants, but very few on second-generation immigrants. Recently, U.S. and Canadian scholars have paid more attention to second-generation immigrants and to the earnings mobility between the first-generation and second-generation immigrants. This paper focuses on

the economic performance of immigrants and their children compared with native-born individuals and children of native-born parents using the 2001 Canadian Census. The paper includes five parts. Part one is a brief overview of Canadian immigration policy and history. Part two is a literature review of studies on the performance of immigrants and their children, both in the United States and in Canada. Part three introduces the basic empirical framework, including the data, variables and model used. Part four presents the empirical results and compares them with other researches and studies. The last part summarizes and concludes the paper.

I. Immigration Policy and History

Before 1962, the regulation of immigration to Canada was based on country of origin of the prospective immigrant. The source countries were divided between preferred and non-preferred countries. There were few requirements for admission for the prospective immigrants from the preferred countries, such as the United Kingdom, the United States, France, and the Netherlands. Immigrants from the preferred countries also had the right to sponsor their relatives. However, prospective immigrants from non-preferred countries, such as Asian countries, had to meet a variety of conditions for admission, and their sponsorship rights were limited (Green and Green, 1995).

Many changes in Canada's immigration policy were introduced in the early 1960s. The demand for labour shifted from unskilled to skilled workers; moreover, a change in attitudes away from discrimination in both the United States and Canada influenced the immigrant selection process. As a result, the Canadian government revised the immigration policy in 1962, with the prospective immigrants being admitted to Canada

based on their education and skills, with no preference for country of origin (Green and Green, 1995). This supposedly non-discriminatory immigration policy also provided greater sponsorship rights to immigrants over the world, including immigrants from countries with lower average income and education levels, which caused the unskilled worker supply to increase. Therefore, the government introduced new regulations to solve the problem of the increasing number of unskilled workers.

In 1967, the Canadian government introduced the Point System to control the quantity and skills of immigrants to be admitted to Canada. The point System is a major element of the Canadian immigration policy in which immigrants are divided into two classes: assessed and non-assessed. The assessed class, which includes independent and assisted relatives, has accounted for a larger proportion of immigrants than the non-assessed class in the last two decades. Under the Point System, individuals in the assessed class are evaluated on the basis of personal characteristics, and preferences are given to individuals who have higher education level and technical skills. The non-assessed class includes the family class and the refugee class. Family members and refugees are not required to submit to skills evaluation, and their admissions are based on humanitarian considerations.

The Point System not only controls the type of immigrants admitted to Canada, but it is also an instrument to control the total number of immigrants admitted to Canada each year, which can vary in response to events in the domestic economy, such as recession and high unemployment. In the mid-1970s and the 1980s, the government decreased the levels of immigration because the recessionary economy caused high employment and reduced economic growth (Green and Green, 1995).

The introduction of the Point System in 1967 was a success to control the quality and quantity of immigration, and it had a large impact on the inflow of immigrants admitted to Canada. Since the assisted relative class was created under the Point System, and since the government planned substantial numbers of refugees each year and provided top processing priority to refugees and family class applicants, the target population shifted around 1978 from the independent class to the refugee and family classes (Green and Green, 1995). Moreover, starting in the 1960s, the source of immigration shifted from European countries to developing countries. For the first 60 years of the past century, European countries such as the United Kingdom, Italy, Germany and the Netherlands, as well as the United States, were the primary sources of immigrants to Canada. Since then, the largest numbers of immigrants were from Asian countries, especially the People's Republic of China, Hong Kong, and India. These immigrants settled in the major metropolitan areas, with about more than half of the total arrivals living in and around the Toronto and Vancouver areas. Between 1956 and 1976, 63.6 percent of the immigrants came from Europe and only 11.9 percent from Asia. By 2004, the flows had almost completely reversed, with only 17.8 percent of immigrants coming from Europe and 48.6 percent from Asia (Ray, 2005).

In the 1990s, the government set immigration levels each year according to domestic economic conditions. The refugees and family classes still obtained high priority; however, the total number of immigrants who were in the family class was reduced. Indeed, the government controlled the immigration inflow by creating a designated occupations list which contained occupations in high demand in the Canadian labour

market. Applicants received extra points and had high processing priority if they matched this occupations list (Green and Green, 1999).

The Point System is still used in recent immigration policy to control the quality and quantity of immigrants admitted into Canada. Recent immigration policy aims to increase population growth, readjust the age structure of the population, improve the flexibility and diversity of workforce and contribute to economic growth. Humanitarian aspects and family reunification are also important concerns. The government gives high processing priority to the immigrants who are in the independent class. Education and skills, proficiency in English or French, and occupation are favorable criteria. The government wants to ensure the success of immigrants in settlement and employment; it welcomes individuals who can gain employment and contribute to the Canadian economy (Reitz, 2001). In 2001, out of over 250,000 people who came to Canada, 61% were economic immigrants, 27% were family class immigrants, 11% were refugees and 1% were from other categories (Citizenship and Immigration Canada, 2002).

II. A Literature Review of Empirical Research

Scholars have been focusing on the study of the performance of immigrants in the labour market in terms of earnings for several decades. Most of the literature is on the performance of first-generation immigrants, but the literature on second-generation immigrants is growing. Since the early 1990s, more and more scholars have been interested in studying the performance of second-generation immigrants and the intergenerational mobility of immigrants. In addition, some studies compare economic performance between immigrants' children and children of native-born parents. Some of

the U.S. and Canadian representative studies for both first-generation and second-generation immigrants are discussed in the following paragraphs.

1. First-Generation Immigrants

Chriswick (1978) examined the performance of foreign-born white men in terms of earnings by using the 1970 U.S. Census of Population and the human capital earnings function. His results indicated that the foreign born have lower earnings at the time of entry than the native born; however, their earnings grow rapidly in the first few years after immigration, and they can assimilate fully into the labour market after about 13 years after immigration. Borjas's major contribution was to combine two censuses at the same time in order to distinguish between cohort effects and assimilation effects.[1] Using the 1970 and 1980 U.S. Census, Borjas (1985) pointed out that the growth rate on the earnings of immigrants was overestimated in the previous cross-sectional studies. The income of immigrants did not grow as rapidly as Chiswick estimated because the recent immigrant cohorts had lower earnings than the earlier ones.

Following the studies by Chiswick (1978) and Borjas (1985), a large amount of literature on the economic performance of immigrants in the Canadian labour market has emerged. Baker and Benjamin (1994) and Bloom, Grenier and Gunderson (1995) examined the entry effect, assimilation effect and cohort effect by using the 1971, 1981, and 1986 Canadian Censuses.[2] Their results showed that the earnings of both male and

[1] As defined in Bloom, Grenier and Gunderson (1995), the cohort effect represents the average unobserved quality of particular immigrant cohorts relative to the omitted reference group of immigrants. The assimilation effect is the average percentage change in immigrants' earnings for each year after they immigrant to Canada.

[2] As defined in Bloom, Grenier and Gunderson (1995), the entry effect is the difference in earnings between immigrants and the native-born individuals at the time of entry.

female immigrants fell short at the time of entry relative to native-born individuals, and that the earnings of immigrants grow more rapidly over time than those of the native born. However, recent immigrant cohorts need more time to assimilate into the Canadian labour market than their predecessors, and their convergence with native-born individuals may not be attainable in their whole life. One of the major causes of the deterioration of earnings is the changing distribution of source countries of immigrants.

Subsequently, Grant (1999) showed that immigrants who arrived between 1980 and 1985 experienced a relatively higher assimilation rate during the period of 1985 to 1990, due to a stronger Canadian labour market that prevailed during that period. Although recent cohorts assimilated faster than their predecessors, their entry earnings were still low. Waslander (2003) focused on the residents of the metropolitan areas and demonstrated that new immigrant earnings decreased by $8,000 between the 1980s and the 1990s, because of lower returns on foreign education and experience, and because high Canadian unemployment rates depressed their earnings.

Recently, using the 1981 through 2001 Canadian Censuses, Frenette and Morissette (2003) showed a substantial deterioration of earnings at time of entry of both recent male and female immigrant cohorts, with consequently more time being needed for recent immigrant cohorts to assimilate into the Canadian labour market. Furthermore, Aydemir and Skuterud (2005) explored the causes of the deterioration in entry earnings of both male and female immigrants. Their findings suggest that approximately two-thirds of the male and one-half of the female deterioration in entry earnings is due to factors that are not related to labour market conditions. The decline in entry earnings is also explained by

the shift in the knowledge of official languages, region of birth, and the decline in returns to foreign labour market experiences.

Overall, first-generation immigrants have lower earnings at the time of entry, and their earnings grow rapidly compared to the native born in both the United States and Canada. However, recent immigrant cohorts face more difficulties and challenges than their predecessors. The entry earnings for recent immigrant cohorts is lower and full assimilation in terms of catching up to the native born may be unattainable.

2. Second-Generation Immigrants

Chiswick (1977) examined the effect of foreign parentage on the earnings of native-born white men aged 25 to 64 with data from the 1970 U.S. Census using the human capital earnings function. The effect of having a foreign parent may depend on whether only the father, only the mother, or both parents were foreign-born. The results suggest that white men with foreign parentage have an earnings advantage compared to white men with both native-born parents, particularly if only the father is foreign born. Other things being the same, earnings are 5 percent higher for individuals with one or both foreign-born parents. Compared to men with native-born parents, earnings are higher by 7.7 percent if only the father is foreign born, 5.6 percent if both parents are foreign born, and 3.7 percent if only the mother is foreign born. Furthermore, Chiswick explained the reasons of the higher earnings of foreign parentage by doing a decomposition study. Men with foreign parentage have higher earnings because they are more likely to live in metropolitan areas and have greater labour market experience. However, if a language

other than English was spoken in the home when the person was a child, the earnings are lower.

Borjas (1993) obtained similar results to Chiswick (1977). He showed that the second-generation immigrants have higher income than the first-generation and the native born. Using the U.S. Censuses from 1940 to 1990, he showed that the second-generation experienced a 7 percent increase in earnings compared to the first-generation. The main reasons for the increase in the earnings profile is that the second-generation has higher education level, is more proficient in English, and is better informed about opportunities in the U.S. labour market than their parents. He also studied the intergenerational mobility of immigrants and showed that the average earnings of the second-generation are strongly influenced by the earnings of their parents. Moreover, the economic conditions in the source countries played an important role in determining the earnings of both first-generation and second-generation immigrants. Both immigrants and their children have higher earnings if they originated from a high-income country or from countries where English is an official language.

Recently, Ramakrishnan (2004) studied the socio-economic performance of second-generation U.S. immigrants using data from the March Current Population Survey from 1999 to 2001. In his paper, he defined the "2.0 generation" as the native-born individuals with a foreign-born parent and a native-born parent, the "2.5 generation" as the native-born individuals with both foreign-born parents, and the "3.0 generation" as the native-born individuals with both native-born parents. Ramakrishnan argued that the members of the "2.5 generation", with both foreign-born parents, and the "2.0 generation", with a foreign-born parent and a native-born parent, should not be lumped together because the

"2.5 generation" is a numerically significant population, and its important demographic characteristics are different from those of the "2.0 generation". The "2.5 generation" is also different from the third-generation with both native-born parents in terms of demographic characteristics and socio-economic outcomes. Ramakrishnan showed that the "2.5 generation" fare better than the "2.0 generation" and the third-generation in both educational attainment and earnings. The "2.5 generation" has 26 to 28 percent higher earnings than the "2.0 generation" with both foreign-born parents in the multivariate context. Moreover, the "2.5 generation" immigrants earn 14 percent more than those in the third-generation with both native-born parents in the bivariate context.[3]

Aydemir, Chen and Corak (2005) examined the intergenerational income mobility between first and second-generation Canadians using the 2001 Census.[4] Their major conclusions were that relative earnings mobility of Canadians born to immigrant parents is not as important as in the United States. The least squares estimates of standard regression to the mean models of intergenerational income mobility show that the generational elasticity in father-son annual earnings is 0.18 and is no different between the immigrant population and the Canadian population at large. On the other hand, the relationship between father and daughter earnings is not statistically significant. In addition, the relationship between father's earnings and son's educational attainment is weak, and the return to education for second generation men is low. Although the return to education is higher for daughters, parental earnings have little impact on daughter's educational attainment. The results of using quantile regressions show that average years

[3] The estimates for the differentials in outcomes are larger than those reported in other studies because Ramakrishnan uses raw data, before controlling for age, racial composition and gender.
[4] The second-generation sample consists of individual between 25 and 37 years old in 2001, with both foreign-born parents who came to Canada before 1981.

of parental education is important for determining the degree of intergenerational earnings mobility of Canadian immigrants. For both sons and daughters, father's education level plays an important role in determining children's economic performance.

To sum up, the second-generation immigrants have higher earnings than the first-generation immigrants and native born in both the United States and Canada. In addition, intergenerational income mobility between first and second generation does exist, but the correlation is not strong.

III. Empirical Framework: Data and Model

1. Data Description

Some additional questions were introduced in the 2001 Canadian Censuses. New variables of "Place of Birth of Father", "Place of Birth of Mother", and "Generation Status" are added into the 2001 Census, which allow the examination of the performance of second-generation immigrants with different foreign parentages and the comparison with those whose parents were native-born.[5] Before studying the economic performance of the first-generation immigrants and their children, it is important to define the group of second-generation immigrants. The definition of a second-generation immigrant takes two different levels. Commonly, second-generation immigrants are defined as native-born residents who have at least one foreign-born parent. (Borjas, 1999; Ramakrishnan,

[5] The variables of "place of birth of father" and "place of birth of mother" refer to the country where the respondent's father and mother were born respectively. The variable of "generation status" refers to whether the respondent or the respondent's parents were born in or outside Canada, including first-generation, second-generation (only one parent born outside Canada or both parents are born outside Canada), and third-generation and over. Information on place of birth of parents was also provided in the 1971 Canadian Census, but that information was restricted to whether or not the respondent's parents were born in or outside Canada, without identifying their region of birth.

2004). However, some scholars have pointed out that experiences and outcomes of individuals with only one foreign-born parent may be distinct from those of individuals with two foreign-born parents; as a result, those two groups of people should not be lumped together. In this way, second-generation immigrants are divided between individuals whose parents are both foreign-born, those with a native-born mother and a foreign-born father, and those with native-born father and foreign-born mother. Third-generation and over immigrants are defined as individuals who are Canadian-born and whose parents were both born in Canada.

The analysis uses the public use microdata file of the 2001 Canadian Censuses. The samples under study include both males and females aged 25 to 64, residing permanently in Canada, excluding the Atlantic provinces.[6] Moreover, only the individuals who worked at least one week and had positive wages and salaries are selected.

2. Model Specification

The empirical analysis starts from Chiswick's human capital earnings equation by adding dummy variables for the status of the second-generation immigrants. Throughout the paper, the analysis is based on the estimates of the basic empirical model (1) and the extended model (2) described below. The basic empirical model is a linear regression of the logarithm of annual earnings on the exogenous variables.

[6] The residents of the Atlantic provinces are excluded because some information on the characteristics of immigrants, such as country of origin is missing. Non-permanent residents are also excluded. Those include persons from another country who had an employment authorization, a student authorization, a Minister's permit, or who were a refugee claimants at the time of the census, and family members living here with them.

$$y_i = X_i\beta + \sum_j \Theta_j COH_{ij} + \delta_1 \text{ Secndmth}_i + \delta_2 \text{ Secndfth}_i + \delta_3 \text{ Secndboth}_i + \varepsilon_i \quad (1)$$

where

y_i = natural logarithm of earnings of individual i;

X_i = vector of standard human capital determinants of earnings and other control variables (including education, potential working experience, working experience squared, marital status, weeks worked in 2000, and full-time or part-time weeks worked in 2000).[7]

COH_{ij} = a vector of time-period dummy variables of immigrants' year of entry into Canada, coded in five-year intervals (Canadian-born individuals are coded as 0).[8] The reference category is Canadian-born individuals.

Secndmth, Secndfth, and Secndboth are dummy variables for the second-generation immigrants with the foreign-born mother only, the foreign-born father only, and both foreign-born parents respectively.[9] The reference group is the Canadian born whose parents are both born in Canada.

Since only one census is used in the analysis, the assimilation effect and the cohort effect cannot be identified separately. The coefficients Θ_j measure the average earnings differences in percentage terms of the cohorts of immigrants relative to reference group of the native-born individuals. The expectation of the sign of the estimate of Θ_j is negative for recent cohorts, reflecting that cohorts of immigrants have earnings

[7] See Appendix A1 for details.
[8] Note that only the last group of cohorts of immigrants is not coded in five-year intervals. The variable "Coh9601" refers to the cohorts of immigrants who entry into Canada between 1996 and 2001.
[9] See Appendix A1 for details.

disadvantages compared to the native-born individuals. For earlier cohorts who have fully assimilated into the labour market, the expectation of the sign of the estimate of Θ_j is positive. Furthermore, the coefficients δ_1, δ_2 and δ_3 are the average earnings differences in percentage terms between the second-generation immigrants and the third-generation and over which defined as the Canadian-born individuals whose parents are both native-born. Based on the previous U.S. and Canadian studies on second-generation immigrants, the estimates of δ_1, δ_2 and δ_3 expected to be positive, indicating that second-generation immigrants have higher annual earnings than the third- generation and over, whether with foreign-born mother only, foreign-born father only, or both foreign-born parents.

The extended model adds dummy variables providing more information on region of origin of first-generation and second-generation immigrants. The regions of origin are divided into two groups: 1) the United States and Europe, and 2) Asia, Africa, Latin America and other countries.[10] For the second-generation immigrants, a category for those whose parents were born in different regions of the world is also added.

$$y_i = X_i\beta + \sum_j \sum_k \Theta_{ijk} COH_{ijk} + \delta_1 \text{ Mthuseuro}_i + \delta_2 \text{ Mthasiaother}_i + \delta_3 \text{ Fthuseuro}_i + \delta_4 \text{ Fthasiaother}_i + \delta_5 \text{ Bothuseuro}_i + \delta_6 \text{ Bothasiaother}_i + \delta_7 \text{ Bothdifferent}_i + \varepsilon_i \quad (2)$$

where k = 1, 2 indicates region of origin.

[10] Other countries refer to Oceania and countries and regions not elsewhere classified.

Mthuseuro, Mthasiaother, Fthuseuro, Fthasiaother, Bothuseuro, Bothasiaother and Bothdifferent are dummy variables for the second-generation immigrants with the foreign-born mother only, the foreign-born father only, or both foreign-born parents who are from different source regions. The reference group is the Canadian born with both native-born parents.[11]

The cross-sectional regressions are estimated based on the 2001 census and for males and females separately. Appendix table A1 defines all the variables used in the basic model (1) and the extended model (2). Appendix table A2 and table A3 present the basic descriptive statistics and estimated parameters for the variables used in model (1). The descriptive statistics and empirical results of the estimated parameters for the human capital and other control variables for model (2) are shown in Appendix table A4 and table A5 respectively.

IV. Empirical Results and Interpretation

1. The Basic Empirical Model

Appendix table A2 shows that there are differences in the mean wage rate, the average years of schooling and mean working experience between men and women in the data set used in this paper. For example, men have higher income and longer working experience than women. The logarithm of wages and salaries in dollars (Lnwages) is 10.37 for men and 9.89 for women. On the other hand, women have more years of schooling than men. The average years of schooling (Edu) is 13.59 for men and 13.82 for women. In addition, the descriptive statistics show that the second-generation immigrants account for a

[11] See Appendix A1 for details.

Table 1 Total Number of Immigrant Cohorts by Region of Birth

	Total	*United States and Europe*	*Asia and Other Countries*
Cohort pre1965	8,951	8,110	832
Cohort 1966-70	7,130	4,980	2,143
Cohort 1971-75	8,831	3,985	4,840
Cohort 1976-80	7,109	2,625	4,476
Cohort 1981-85	5,852	1,948	3,900
Cohort 1986-90	9,327	2,502	6,817
Cohort 1991-95	10,758	2,406	8,349
Cohort 1996-01	9,287	2,148	7,137

Source: descriptive statistics based on the 2001 Canadian Census.

considerable proportion of the sample. Table 1 presents the total number of immigrants by cohort and region of origin. It shows that the number of immigrants admitted to Canada has increased since the middle of the 1980s with the exception of the last immigrant cohorts between 1996 and 2001. It also shows that the recent cohorts are likely to be from Asia, Africa, Latin America and other countries.

Table 2 presents selected regression coefficients of the basic model for immigrant cohorts and second-generation immigrants. The complete regression results are shown in Appendix table A3. The reference group is the native-born individuals and the native-born individuals whose parents are born in Canada. Overall, the results in Table 2 are consistent with the expectation that the recent immigrant cohorts have an earnings disadvantage relative to the native born. The second-generation immigrants have higher earnings than the Canadian-born individuals with native-born parents. The male first-generation immigrants have lower earnings than the native-born individuals with the exception of the immigrant cohort before 1965 and between 1966 and 1970. For example,

Table 2
Regression Results, Basic Model, Men and Women

	Men	*Women*
Variable	*Coefficient Estimate*	*Coefficient Estimate*
Cohpre65	0.05033	0.09652
	(3.87)	(6.79)
Coh6670	0.01542	0.04176
	(1.07)	(2.69)
Coh7175	-0.01302	0.02977
	(-0.99)	(2.18)
Coh7680	-0.08180	-0.01722
	(-5.63)	(-1.14)
Coh8185	-0.14230	-0.02829
	(-8.89)	(-1.71)
Coh8690	-0.22271	-0.12405
	(-17.45)	(-9.34)
Coh9195	-0.30805	-0.24849
	(-25.48)	(-20.26)
Coh9601	-0.41378	-0.35586
	(-32.89)	(-25.71)
Secndmth	0.03940	0.04181
	(3.13)	(3.18)
Secndfth	0.03933	0.03954
	(3.59)	(3.51)
Secndboth	0.04436	0.08503
	(5.26)	(9.49)

NOTES:
The figures in parentheses are the t-statistics.
All coefficients are obtained from regression results of model (1).
The reference group for the first generation is the native-born individuals.
The reference group for the second generation is the native-born individuals whose parents born in Canada.
Source: based on regression results in Appendix table A3.

the male immigrant cohorts before 1965 experienced 5 percent higher earnings than the Canadian-born individuals, other factors held constant. The reason that the cohorts of immigrants before 1965 performed well in the Canadian labour market perhaps was that they are from Western Europe and the United States and they were fluent in English and have similar cultural background. They have also been in Canada for a long time and assimilated fully into the Canadian labour market.[12] Although the cohorts between 1966 and 1970 had earnings advantages relative to the Canadian-born individuals, the coefficient is not significant (t = 1.07).

Each successive cohort of male immigrants had earnings disadvantage compared to the Canadian born, even after controlling for the human capital variables. The earnings for the cohort of immigrants arriving between 1971 and 1975 began to fall behind the native-born men, but the coefficient is not significant (t = -0.99). For the cohort of immigrants between 1976 and 1980, their earnings were less than the native-born men, perhaps because humanitarian and family reunification criteria were emphasized in the immigration policy during this period. The trend of decreasing earnings for the cohort of immigrant arriving in the 1980s is pronounced. One reason of the dramatic decline in earnings is that the Canadian economy experienced the great recession between 1980 and 1983, and this recession had a long lasting effect on the Canadian economy during the 1980s. In the 1990s, the earnings for the male cohort immigrants continued to decline. The gap in earnings for male cohort immigrants arriving between 1996 and 2001 peaked at 41.4 percent. The pronounced gap in earnings between the recent male cohort immigrants can be explained by the continued shifting trend in the source countries for

[12] Remember that the parameter Θ_j includes both cohort and assimilation effects.

immigration. The source countries shifted from Europe and the United States to Asian countries. Immigrants from Asian countries do not have similar cultures or education system as Canadians, and their official languages are not English or French.

More and more women became independent economically and entered to the labour market in the past two decades, and the recent studies did not only focus on the economic performance of male immigrants, but also of female immigrants. Table 2 also displays the economic performance of female immigrants. Overall, the trend in earnings for the female immigrant cohorts is similar to that of the male cohorts of immigrants. Although the results for female immigrants are better than those of the male immigrants, they still show a gap relative to native-born women. The female immigrant cohorts arriving before 1965 had 9.7 percent higher earnings than the reference group of native-born women. For the female immigrant cohorts arriving between 1966 and 1970 and between 1971 and 1975, their earnings were respectively 4.2 percent and 3.0 percent higher than the reference group. The trend of falling income for female immigrant cohorts began in the middle of the 1970s. For instance, the female immigrant cohorts arriving in Canada in 1976-80 and 1981-85 had 1.7 percent and 2.8 percent lower earnings than the reference group. One reason for the decreasing earnings was that family reunification criterion was emphasized in 1978 and the Canadian economy was in a recessionary phase in the period of 1980s. The earnings differences before 1985 were not significant, but the trend of decreasing earnings relative to the native-born women is remarkable for the successive female immigrant cohorts. Female immigrant cohorts between 1986 and 1990 had an earnings disadvantage of 12.4 percent relative to the native-born individuals. In addition,

the female immigrant cohorts arriving in the periods of 1991-95 and 1996-01 had respectively 24.8 percent and 34.6 percent lower earnings than the reference group.

Although first-generation immigrants face an unfavourable earnings profile, the children of immigrants experience earnings advantages compared to the native-born individuals with parents born in Canada. The last three rows of Table 2 present regression results of both male and female second-generation immigrants' performance relative to the third- generation and over. Overall, those results are in accordance with the expectation that the second-generation immigrants have higher earnings, but the positive coefficients δ_1, δ_2 and δ_3 on the second-generation immigrants are smaller than the negative coefficient Θ_j on the first-generation immigrants. Specifically, the second generation with one foreign-born parent or both foreign-born parents have slightly different earnings differentials. For example, the second-generation immigrant males with only foreign-born mother and only foreign-born father faced the same earnings differentials, 3.9 percent higher earnings than the third-generation and over. Moreover, the second-generation immigrants with both parents were foreign born experienced 4.4 percent higher earnings than the reference group.

The female second-generation immigrants faced a similar wage differential as the second-generation immigrant men. The second-generation immigrant women with foreign-born mother only had 4.2 percent higher earnings than the reference group. For the female second-generation immigrants with foreign-born father only, income was still 4.0 percent higher than the third-generation and over. The most pronounced earnings advantage is the female second-generation immigrants with both parents being foreign-

born. They experienced 8.5 percent higher income than the reference group, which is more than the male second-generation immigrants.

The above results indicate that the differences between second-generation immigrants with only the mother being foreign-born, only the father being foreign-born, or both parents being foreign-born are relatively small. Although it was decided to consider those groups separately, they could have been pooled together.

2. The Extended Model

The extended model adds dummy variables for region of origin. Appendix table A4 presents the means of the basic characteristics for men and women drawn from the 2001 census. Table 1 above also shows the total number of the immigrants by their source regions. The number of immigrants from the United States and Europe has decreased since the 1970s. On the other hand, the number of immigrants from Asia, Africa, Latin America, and other countries has increased at the same time. The descriptive statistics in Appendix table A4 separate the results for males and females, and the conclusions of Table 1 remain. For instance, the male and female immigrant cohorts from the United States and Europe before 1965 were respectively 2.9 percent and 2.6 percent of the population as measured by the census file. These proportions are reduced to 1.3 percent for both male and female immigrant cohorts between 1971 and 1975. In the 1990s, immigrant men and women from the United States and Europe were only between 0.7 and 0.8 percent. By contrast, the proportions of immigrant cohorts from Asia, Africa, Latin America and other countries increased dramatically since the 1990s, especially for the Asian countries. The proportions of male immigrant cohorts arriving in 1991-95 and

1996-01 account for 2.7 percent and 2.5 percent of the sample respectively. The male immigrant cohorts before 1965 and between 1966 and 1970 were only between 0.3 and 0.7 percent of the population respectively. This analysis is consistent with the conclusions obtained in other studies that the composition of the immigration flow has shifted from the traditional immigration countries of the United States and Europe to Asia, Africa, Latin America and other countries.

The total numbers of second-generation immigrants by region of origin with foreign-born mother only, foreign-born father only, and both foreign-born parents are shown in Table 3. More than 90 percent of the second-generation immigrants have either United States or European parentage as of 2001. Appendix table A4 shows that the proportion of the male and female second-generation immigrants with United States and European foreign parentage is higher than those with Asian and other countries foreign parentage. For instance, the male and female second-generation whose parents are from the United States or Europe accounted for 6.6 percent and 6.5 percent of the total sample respectively; however, the second-generation men and women with both parents from Asia and other countries account for only 0.9 percent and 0.8 percent respectively. The reasons for the large proportion of the second-generation immigrants with United States and European foreign parentage are that the earlier immigrants were mostly from those regions. While the immigrant cohorts from the United States and Northern and Western Europe have been entering Canada since the early 1900s, the largest numbers of first-generation immigrants from Asia, Africa, Latin America and other countries were admitted into Canada after the1970s. In addition, most studies pointed out that immigrants from the United States and Europe performed better in the labour market than

Table 3 Total Number of Second-generation Immigrants by Region of Birth of Parents

	Total	*United States and Europe*	*Asia and Other Countries*
Foreign-born Mother Only	9,547	9,035	512
Foreign-born Father Only	13,110	12,390	720
Foreign-born Parents (from the same region)	22,663	19,551	2,530
Foreign-born Parents (from different regions)	582		

Source: descriptive statistics based on the 2001 Canadian Census.

those from Asia, Africa, Latin America and other countries; thus, they had more chance to settle here (form a family and have children) than those from Asia, Africa, Latin America and other countries. The last row in Appendix table A4 shows the number of second-generation immigrants with parents from different regions (such as Asian mother and European father). The proportions are respectively 0.2 percent and 0.19 percent for the second-generation men and women.

Table 4 provides selected regression results for male first-generation and second-generation immigrants by region of origin. Complete regression results are shown in Appendix table A5. The reference group is the native-born men and the native-born men with parents born in Canada. Overall, the first-generation men from the United States and Europe who arrived before 1985 had higher earnings than the native-born men; however, the immigrant cohorts from the United States and Europe arriving after 1985 and all the immigrant cohorts from Asia, Africa, Latin America and other countries had lower earnings than the comparable reference group. The second-generation men have higher

Table 4
Regression Results, Extended Model, by Region of Origin, Men

	Coefficient Estimate	
Variables	*United States and Europe*	*Asia and Other Countries*
Cohort pre1965	0.05470	0.00677
	(4.05)	(0.16)
Cohort 1966-70	0.03746	-0.03593
	(2.22)	(-1.38)
Cohort 1971-75	0.07771	-0.09031
	(4.07)	(-5.11)
Cohort 1976-80	0.03613	-0.15293
	(1.55)	(-8.38)
Cohort 1981-85	0.03457	-0.22415
	(1.24)	(-11.60)
Cohort 1986-90	-0.06167	-0.28482
	(-2.60)	(-19.10)
Cohort 1991-95	-0.09970	-0.36780
	(-3.98)	(-27.03)
Cohort 1996-01	-0.22775	-0.46917
	(-8.90)	(-33.07)
Foreign-born mother only	0.03367	0.13818
	(2.60)	(2.66)
Foreign-born father only	0.03935	0.04148
	(3.51)	(0.90)
Foreign-born parents (from the same region)	0.04900	0.02880
	(5.46)	(1.20)
Foreign-born parents (from different regions)	-0.04594	-0.04594
	(-0.93)	(-0.93)

NOTES:
The figures in parentheses are the t-statistics.
All coefficients are obtained from regression results of model (2).
The reference group for immigrant cohorts is the native-born individuals.
The reference group for the second generation is the native-born individuals whose parents born in Canada.
Source: based on regression results in Appendix table A5.

earnings than the reference group, who are the native-born men whose parents were born in Canada, with the exception of the second-generation immigrants with foreign-born parents from different regions.

The earlier male immigrant cohorts from the United States and Europe performed very well in the Canadian labour market. For example, the male immigrant cohorts who arrived before 1965 had 5.5 percent higher earnings than the Canadian-born men. The highest earning profile was reached for the immigrant cohorts between 1971 and 1975, who had 7.8 percent more income than the reference group. Although the male immigrant cohorts between 1976 and 1980 still had 3.6 percent more earning than the reference group, the earnings differentials for the male first-generation immigrants from the United States and Europe began to decrease after the late of 1970s, perhaps because the distribution of source countries was changed from the United States and Western Europe to Eastern Europe, and also because the Canadian economy was in a recession in the early 1980s. The recent immigrant cohorts arriving in 1991-95 and in 1995-01 had 10.0 percent and 22.8 percent lower earnings than the Canadian-born men.

The male immigrant cohorts from Asia, Africa, Latin America and other countries have larger earnings disadvantage than those from the United States and Europe compared to the Canadian-born men. The first-generation men arriving in 1971-75 and 1976-80 had respectively 9.0 percent and 15.3 percent lower earnings than the reference group. The decreasing trend in relative earnings is severe for the recent immigrants who are from Asia and other countries. For the immigrant cohorts arriving in 1986-90 and 1991-95, their earnings were respectively 28.5 percent and 36.8 percent lower compared to the reference group. Even worse, the immigrant cohorts that arrived between 1996 and

2001 earned 46.9 percent less than the reference group even after controlling the human capital variables. The above results are consistent with those of other studies and the expectations discussed in this paper that the recent immigrants have high earnings disadvantages relative to the native born.

The economic performance of second-generation immigrant men by source region is also presented Table 4. The reference category is the Canadian-born men with both native-born parents. The results show that the second-generation men have higher earnings than the reference group, except for the small group of male second-generation immigrants with parents from different regions. Male second-generation immigrants from the United States and Europe with foreign-born mother only, foreign-born father only, and both foreign-born parents had respectively 3.4 percent, 3.9 percent, and 4.9 percent higher earnings than the reference group.

Second-generation men from Asia and other countries also have earning advantages compared to the reference group, but the coefficient is significant only for those with foreign-born mother and native-born father. The second-generation men with a mother born in Asia and other countries and a father born in Canada performed the best among all of the groups in the Canadian labour market, with earnings 13.8 percent higher than the reference group. Those with only foreign-born father and both foreign-born parents do not earn significantly more than the reference group. For the second-generation men whose parents were from different regions, earnings were 4.6 percent lower relative to the reference group, but the coefficient was not significant ($t = -0.93$). Table 4 also shows that the positive earnings effect for the second-generation immigrants with Asian and other countries parentage is not as significant as those with United States or European

parentage, except the group of the second-generation immigrants with the foreign-born mother only. One reason is that over 90 percent of the second-generation immigrants have either United States or European parentage, but only few have Asian or other countries parentage.

Table 5 summarizes the economic performance of female immigrant cohorts and their children by region of origin. Complete regression results are in Appendix table A5. The regression results for the first-generation and second-generation women are similar to those for men. For the female first-generation immigrants from the United States and Europe, the cohorts before 1980 had higher earnings, but the immigrants arriving after 1980 had lower earnings than the reference category. Moreover, the trend of falling income for the recent female immigrant cohorts is obvious since the 1990s. Compared to the reference category, the female immigrant cohorts arriving in 1991-95 and 1996-01 had respectively 10.0 percent and 22.8 percent less income.

The first-generation women from Asia, Africa, Latin America and other countries faced the worse situations relative to those from the United States and Europe; in addition, the earnings of the recent female immigrant cohorts were much lower than those of the reference category. While the early immigrants in the 1980s and before from the United States and Western Europe had earnings advantages, the early immigrant from Asia, Africa, Latin America and other countries have had lower incomes since the early 1970s. Recently, over half of the recent immigrants were from Asian countries, such as the People's Republic of China and India. Some of the reasons for the immigrants from Asian countries having much lower earnings are that their culture is quite different from that of the Western culture, and that the language fluency is not as good as that of

Table 5
Regression Results, Extended Model, by Region of Origin, Women

	Coefficient Estimate	
Variable	*United States and Europe*	*Asia and Other Countries*
Cohort pre1965	0.08961	0.15570
	(5.99)	(3.70)
Cohort 1966-70	0.04225	0.04372
	(2.28)	(1.59)
Cohort 1971-75	0.09347	-0.02102
	(4.62)	(-1.16)
Cohort 1976-80	0.01724	-0.03586
	(0.69)	(-1.91)
Cohort 1981-85	-0.00195	-0.0429
	(-0.07)	(-2.08)
Cohort 1986-90	-0.05502	-0.14854
	(-2.14)	(-9.70)
Cohort 1991-95	-0.18157	-0.26739
	(-7.18)	(-19.32)
Cohort 1996-01	-0.24909	-0.38894
	(-8.95)	(-24.75)
Foreign-born mother only	0.04102	0.05805
	(3.04)	(1.02)
Foreign-born father only	0.04346	-0.02463
	(3.76)	(-0.54)
Foreign-born parents	0.08593	0.06798
(from the same region)	(9.01)	(2.66)
Foreign-born parents	0.12901	0.12901
(from different regions)	(2.45)	(2.45)

NOTES:
The figures in parentheses are the t-statistics.
All coefficients are obtained from regression results of model (2).
The reference group for immigrant cohorts is the native-born individuals.
The reference group for the second generation is the native-born individuals whose parents born in Canada.
Source: based on regression results in Appendix table A5.

immigrants from the United States and Europe. The most pronounced earning difference between the reference group and the female immigrants was 38.9 percent for the female immigrant cohort that arrived between 1996 and 2001.

Table 5 also provides the results for the second-generation immigrant women from different source regions. Overall, the second-generation women also perform better in the Canadian labour market than the reference group, and both those from the United States and Europe and those from Asia and other countries have earnings advantages, with the exception of those with a foreign-born father from Asia and other countries and a native-born mother. Because most of the earlier immigrants are from the United States and Europe, the results for the second-generation immigrants with United States and European parentage are much more significant than those with Asian, African and Latin American parentage. The second-generation immigrant women with the mother born in the United States and Europe and the father born in Canada had 4.1 percent higher income than the comparable reference categories. Similarly, the second-generation women with father from the United States and Europe and Canadian-born mother had 4.3 percent higher earnings than the third-generation and over. The earnings advantages for the second-generation women with both foreign-born parents are greater than those with only one foreign-born parent. The female second-generation immigrants with both parents from the United States and Europe had 8.6 percent higher income than the reference group. The earnings gap between the female second-generation women whose parents are from different countries and the reference group was approximately 12.9 percent.

The second-generation immigrant women with Asian, African, and Latin American parents also experience earnings advantages, with the exception for those with foreign-born father only. The female second-generation immigrants with a father born in Asia and other countries and a mother born in Canada faced an insignificant 2.5 percent lower income than their third-generation and over counterparts. One possible reason for this particular group of people who have lower income is that Asian parents pay more attention to the education of their sons than their daughters. The estimated results showed that the female second-generation immigrants with mother born in Asia and other countries and Canadian-born father experienced 5.8 percent higher earnings, but the coefficient is not statistically significant ($t = 1.02$); in addition, those with both parents from Asia and other countries had 6.8 percent higher income than the third-generation and over individuals.

V. Conclusion

This paper has examined the economic performance of male and female immigrants and their children in the Canadian labour market. Based on the 2001 Canadian Census, the cross-sectional regression results suggest that the first-generation immigrants face unfavourable prospects, especially the more recent ones; on the other hand, the children of immigrants enjoy good earnings prospects. These results are consistent with the conclusions of other studies.

The number of immigrants from Asia, Africa, Latin America and other countries increased dramatically in the last two decades, but the number from the United States and Europe decreased. These figures indicate that the source countries of immigration have

shifted from the traditional European countries to the non-traditional Asian countries. Another important fact is that the total number of immigrants in Canada rose in recent years. Immigrants' children account for a significant proportion of the population and make contributions to the Canadian economy. Because the earlier immigrants were mainly from the United States and Europe, over 90 percent of the second-generation immigrants have parents from those countries.

Based on the 2001 Canadian Census, the regression results pertain to the economic performance as measured by log wages controlling for human capital variables for both male and female first-generation immigrants and immigrants' children compared to the reference group, who are the native-born Canadians. The findings are consistent with prior expectations and conclusions of previous studies that both male and female immigrant cohorts have earning disadvantages relative to the comparable reference group. The male immigrants have had lower income than the male native born since 1970s, and the declining trend on earnings was very pronounced for the more recent cohorts, especially the males. According to the region of origin, the immigrant cohorts from the United States and Europe have better earnings outcomes than those from Asia, Africa, Latin America and other countries. Although earlier immigrants from the United States and Europe perform better, recent immigrant cohorts from those countries fall behind the Canadian born. One reason is that most of the earlier immigrants were from the United States and Western Europe, while the recent immigrants are mainly from Eastern Europe. The female immigrant cohorts faced a fairly similar situation as males, but with slightly better performance in the labour market.

The second-generation immigrants have earnings advantage compared to the native-born individuals with both parents born in Canada. By region of origin, the earnings outcomes for the second-generation immigrants with United States and European parentage or Asian and other countries parentage are almost the same, but the positive effect on the second-generation immigrants whose parents were from Asia and other countries is not significant. The male second-generation immigrants have earnings advantages compared to the third-generation and over, with the exception of those with parents from different regions. The female second-generation immigrants experience similar earnings outcomes as males. All of them have higher earnings than the reference group, with the exception of those with the father born in Asia and other countries. The female second-generation immigrants with parents born in different source countries perform the best among all groups.

Overall, the results obtained in this paper are consistent with the conclusions in previous studies on immigrants that the first-generation immigrants have earnings disadvantages, but that their children perform well in the Canadian labour market. In addition, according to region of origin, the earlier first-generation immigrants from the traditional source countries (the United States and Western Europe) have earnings advantages, but the first-generation immigrants from Asia, Africa, Latin America, and Eastern Europe face lower earnings relative to the native born. In general, the second-generation immigrants have higher earnings for both regions of origin, but the results are less significant for those with parents from Asia and other countries.

Appendix A1 Variable Description

Lnwages: Logarithms of wages and salaries in dollars in 2000;

Edu: Education in years;

Exp: Potential work experience in years, calculated by Age – Education – 6;

Expsq: Squared of potential work experience in years;

Married: Dummy variable for historical comparability indicator of marital status;

Lnsem: Logarithms of weeks worked during 2000;

Tpart: Dummy variable for part-time work in 2000;

Cohpre65: Dummy variable for cohorts of immigrants who arrived before 1965 (reference: Canadian-born individual);

Coh6670: Dummy variable for cohorts of immigrants who arrived between 1966 and 1970 (reference: Canadian-born individual);

Coh7175: Dummy variable for cohorts of immigrants who arrived between 1971 and 1975 (reference: Canadian-born individual);

Coh7680: Dummy variable for cohorts of immigrants who arrived between 1976 and 1980 (reference: Canadian-born individual);

Coh8185: Dummy variable for cohorts of immigrants who arrived between 1981 and 1985 (reference: Canadian-born individual);

Coh8690: Dummy variable for cohorts of immigrants who arrived between 1986 and 1990 (reference: Canadian-born individual);

Coh9195: Dummy variable for cohorts of immigrants who arrived between 1991 and 1995 (reference: Canadian-born individual);

Coh9601: Dummy variable for cohorts of immigrants who arrived between 1996 and 2001 (reference: Canadian-born individual);

Secndmth: Dummy variable for the second-generation immigrants with foreign-born mother only (reference: Canadian-born individual with both native-born parents);

Secndfth: Dummy variable for the second-generation immigrants with foreign-born father only (reference: Canadian-born individual with both native-born parents);

Secndboth: Dummy variable for the second-generation immigrants with both foreign-born father and mother (reference: Canadian-born individual with both native-born parents);

Cohpre65useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived before 1965 (reference: Canadian-born individual);

Cohpre65aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived before 1965 (reference: Canadian-born individual);

Cohpre6670useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1966 and 1970 (reference: Canadian-born individual);

Cohpre6670aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1966 and 1970 (reference: Canadian-born individual);

Cohpre7175useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1971 and 1975 (reference: Canadian-born individual);

Cohpre7175aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1971 and 1975 (reference: Canadian-born individual);

Cohpre7680useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1976 and 1980 (reference: Canadian-born individual);

Cohpre7680aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1976 and 1980 (reference: Canadian-born individual);

Cohpre8185useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1981 and 1985 (reference: Canadian-born individual);

Cohpre8185aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1981 and 1985 (reference: Canadian-born individual);

Cohpre8690useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1986 and 1990 (reference: Canadian-born individual);

Cohpre8690aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1986 and 1990 (reference: Canadian-born individual);

Cohpre9195useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1991 and 1995 (reference: Canadian-born individual);

Cohpre9195aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1991 and 1995 (reference: Canadian-born individual);

Cohpre9601useuro: Dummy variable for cohorts of immigrants born in the United States or Europe who arrived between 1996 and 2001 (reference: Canadian-born individual);

Cohpre9601aisaother: Dummy variable for cohorts of immigrants born in Asia, South America, Africa, or other countries who arrived between 1996 and 2001 (reference: Canadian-born individual);

Mthuseuro: Dummy variable for the second-generation immigrants with foreign-born mother only from the United States or Europe (reference: Canadian-born individual with both native-born parents);

Mthasiaother: Dummy variable for the second-generation immigrants with foreign-born mother only from Asia or other countries (reference: Canadian-born individual with both native-born parents);

Fthuseuro: Dummy variable for the second-generation immigrants with foreign-born father only from the United States or Europe (reference: Canadian-born individual with both native-born parents);

Fthasiaother: Dummy variable for the second-generation immigrants with foreign-born father only from Asia or other countries (reference: Canadian-born individual with both native-born parents);

Bothuseuro: Dummy variable for the second-generation immigrants with both foreign-born parents from the United States or Europe (reference: Canadian-born individual with both native-born parents);

Bothasiaother: Dummy variable for the second-generation immigrants with both foreign-born parents from Asia or other countries (reference: Canadian-born individual with both native-born parents);

Bothdifferent: Dummy variable for the second-generation immigrants with both foreign-born parents from different countries (reference: Canadian-born individual with both native-born parents).

Table A2 Descriptive Statistics, Basic Model
(mean and standard deviation in parentheses when appropriate)

	Men	*Women*
Variable	*Mean*	*Mean*
Lnwages	10.36919	9.88856
	(1.02026)	(1.10390)
Edu	13.59211	13.82141
	(3.08421)	(2.84702)
Exp	22.41266	21.75193
	(10.92395)	(10.75037)
Expsq	621.65948	588.71597
Married	0.73434	0.70881
Lnsem	3.78957	3.71871
Tpart	0.06004	0.23109
Cohpre65	0.03117	0.02879
Coh6670	0.02459	0.02320
Coh7175	0.02927	0.03003
Coh7680	0.02360	0.02413
Coh8185	0.01924	0.02006
Coh8690	0.03088	0.03175
Coh9195	0.03467	0.03765
Coh9601	0.03258	0.02962
Secndmth	0.03169	0.03241
Secndfth	0.04280	0.04529
Secndboth	0.07666	0.07539
Sample Size:	155,314	142,692

Table A3
Regression Results, Basic Model

	Men	*Women*
Variable	*Coefficient Estimate*	*Coefficient Estimate*
Intercept	5.94062	5.24477
	(237.91)	(219.08)
Edu	0.06493	0.08685
	(80.78)	(93.54)
Exp	0.02614	0.02254
	(32.30)	(26.65)
Expsq	-0.00036562	-0.00030840
	(-22.14)	(-17.20)
Married	0.20247	0.04869
	(39.13)	(9.47)
Lnsem	0.82366	0.88155
	(147.95)	(189.07)
Tpart	-0.91268	-0.72426
	(-94.17)	(-126.87)
Cohpre65	0.05033	0.09652
	(3.87)	(6.79)
Coh6670	0.01542	0.04176
	(1.07)	(2.69)
Coh7175	-0.01302	0.02977
	(-0.99)	(2.18)
Coh7680	-0.08180	-0.01722
	(-5.63)	(-1.14)
Coh8185	-0.14230	-0.02829
	(-8.89)	(-1.71)
Coh8690	-0.22271	-0.12405
	(-17.45)	(-9.34)
Coh9195	-0.30805	-0.24849
	(-25.48)	(-20.26)
Coh9601	-0.41378	-0.35586
	(-32.89)	(-25.71)
Secndmth	0.03940	0.04181
	(3.13)	(3.18)
Secndfth	0.03933	0.03954
	(3.59)	(3.51)

Table A3 Continued		
Secndboth	0.04436	0.08503
	(5.26)	(9.49)
R^2	0.2866	0.3771
N	155,314	142,692

NOTES: The figures in parentheses are the t-statistics.

Table A4 Descriptive Statistics, Extended Model
(mean and standard deviation in parentheses when appropriate)

	Men	*Women*
Variable	*Mean*	*Mean*
Lnwages	10.36919	9.88856
	(1.02026)	(1.10390)
Edu	13.59211	13.82141
	(3.08421)	(2.84702)
Exp	22.41266	21.75193
	(10.92395)	(10.75037)
Expsq	621.65948	588.71597
Married	0.73434	0.70881
Lnsem	3.78957	3.71871
Tpart	0.06004	0.23109
Cohpre65useuro	0.02859	0.02572
Cohpre65asiaother	0.00257	0.00303
Coh6670useuro	0.01738	0.01599
Coh6670asiaother	0.00718	0.00720
Coh7175useuro	0.01342	0.01332
Coh7175asiaother	0.01538	0.01669
Coh7680useuro	0.00890	0.00870
Coh7680asiaother	0.01467	0.01540
Coh8185useuro	0.00617	0.00694
Coh8185asiaother	0.01306	0.01312
Coh8690useuro	0.00860	0.00818
Coh8690asiaother	0.02226	0.02355
Coh9195useuro	0.00772	0.00846
Coh9195asiaother	0.02695	0.02917
Coh9601useuro	0.00742	0.00697
Coh9601asiaother	0.02515	0.02264
Mthuseuro	0.02991	0.03076
Mthasiaother	0.00178	0.00165
Fthuseuro	0.04054	0.04270
Fthasiaother	0.00226	0.00259
Bothuseuro	0.06612	0.06504
Bothasiaother	0.00855	0.00842
Bothdifferent	0.00198	0.00192
Sample Size:	155,314	142,692

Table A5
Regression Results, Extended Model

	Men	*Women*
Variable	*Coefficient Estimate*	*Coefficient Estimate*
Intercept	5.94875	5.25067
	(238.21)	(218.87)
Edu	0.06479	0.08668
	(80.56)	(93.16)
Exp	0.02617	0.02249
	(32.27)	(26.50)
Expsq	-0.00036683	-0.00030754
	(-22.19)	(-17.12)
Married	0.20206	0.04743
	(39.08)	(9.21)
Lnsem	0.82205	0.88101
	(147.81)	(188.95)
Tpart	-0.91065	-0.72510
	(-94.05)	(-127.00)
Cohpre65useuro	0.05470	0.08961
	(4.05)	(5.99)
Cohpre65asiaother	0.00677	0.15570
	(0.16)	(3.70)
Coh6670useuro	0.03746	0.04225
	(2.22)	(2.28)
Coh6670asiaother	-0.03593	0.04372
	(-1.38)	(1.59)
Coh7175useuro	0.07771	0.09347
	(4.07)	(4.62)
Coh7175asiaother	-0.09031	-0.02102
	(-5.11)	(-1.16)
Coh7680useuro	0.03613	0.01724
	(1.55)	(0.69)
Coh7680asiaother	-0.15293	-0.03586
	(-8.38)	(-1.91)
Coh8185useuro	0.03457	-0.00195
	(1.24)	(-0.07)
Coh8185asiaother	-0.22415	-0.04239
	(-11.60)	(-2.08)

Table A5 Continued		
Coh8690useuro	-0.06167	-0.05502
	(-2.60)	(-2.14)
Coh8690asiaother	-0.28482	-0.14854
	(-19.10)	(-9.70)
Coh9195useuro	-0.09970	-0.18157
	(-3.98)	(-7.18)
Coh9195asiaother	-0.36780	-0.26739
	(-27.03)	(-19.32)
Coh9601useuro	-0.22775	-0.24909
	(-8.90)	(-8.95)
Coh9601asiaother	-0.46917	-0.38894
	(-33.07)	(-24.75)
Mthuseuro	0.03367	0.04102
	(2.60)	(3.04)
Mthasiaother	0.13818	0.05805
	(2.66)	(1.02)
Fthuseuro	0.03935	0.04346
	(3.51)	(3.76)
Fthasiaother	0.04148	-0.02463
	(0.90)	(-0.54)
Bothuseuro	0.04900	0.08593
	(5.46)	(9.01)
Bothasiaother	0.02880	0.06798
	(1.20)	(2.66)
Bothdifferent	-0.04594	0.12901
	(-0.93)	(2.45)
R^2	0.2883	0.3774
N	155,314	142,692

NOTES: The figures in parentheses are the t-statistics.

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