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The “Negative” Assimilation of Immigrants:
A Counter-example from the Canadian Labour Market

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Abstract

With Canadian data ranging from 1991 to 2011, this paper investigates the effects of the number of years since migration on the earnings of immigrants from the United States and the United Kingdom in Canada. The aim is to test whether the “negative assimilation” hypothesis proposed by Chiswick and Miller (2011) for immigrants to the United States is a universal finding for immigrants from countries with similar economic standing and skill transferability to those of the destination country. We also expand on Chiswick and Miller’s work by doing regressions for both males and females and by comparing to Chinese immigrants, a representative group from a less developed country. We find that the negative assimilation hypothesis does not hold for the Canadian labour market. Specifically, the assimilation rate is close to zero for U.K. immigrants and strictly positive for U.S. immigrants (although lower than that of a comparison group of Chinese immigrants). The assimilation rates are also higher for females than for males.

Key words: *Immigrants, Negative Assimilation, Canada, Skill Transferability.*

JEL Classification: J15, J24, J61.

Résumé

Assimilation « négative » des immigrants : un contre-exemple provenant du marché du travail canadien. Avec des données canadiennes allant de 1991 à 2011, ce document étudie les effets du nombre d’années depuis la migration sur les gains des immigrants des États-Unis et du Royaume-Uni au Canada. L’objectif est de tester si l’hypothèse d’ « assimilation négative » proposée par Chiswick et Miller (2011) pour les immigrants aux États-Unis est un résultat universel qui s’applique aux immigrants venant de pays qui ont des situations économiques semblables et où les connaissances peuvent se transférer facilement au pays de destination. Nous poussons plus loin l’analyse de Chiswick et Miller en analysant les hommes et les femmes séparément et en comparant avec les immigrants de Chine, un groupe représentatif venant d’un pays en développement. Nous obtenons comme résultat que l’hypothèse d’assimilation négative ne s’applique pas au marché du travail canadien. Plus précisément, le taux d’assimilation est près de zéro pour les immigrants du R.U. et est strictement positif pour les immigrants des É.U. (quoique plus petit que celui des immigrants de Chine). Les taux d’assimilations sont aussi plus élevés pour les femmes que pour les hommes.

Mots clés : *immigrants, assimilation négative, Canada, transférabilité des connaissances.*

Classification JEL : J15, J24, J61.

Introduction

The research on the labour market assimilation of immigrants has consistently found that the economic performance of immigrants generally shows *positive* assimilation, i.e., they improve their economic status over time (see, for example, Chiswick, 1978; Bloom, Grenier and Gunderson, 1995; and Campolieti et al., 2013). This is because, as time goes on, immigrants invest in human capital that is specific to the new country, such as learning the language and becoming familiar with the labour market practices and institutions. However, a recent article by Chiswick and Miller (2011, hereafter CM) found that, in certain circumstances, *negative* assimilation may occur, in which case the earnings decline with duration in the destination country. According to CM, the model of negative assimilation is applicable only to immigrants from developed countries with similar culture, language, and labour market practices to those of the host society.

Earnings may decrease with duration in the host society because the economic rent that motivated the initial migration declines over time. For instance, those immigrants who experience negative assimilation are likely to be a selected group of individuals in the first place, who were attracted to the destination country because of higher returns to their skills than expected elsewhere. The relatively high wage that motivated their initial migration, however, may not last indefinitely. Additionally, the decline may indicate a selection bias in return migration. Those migrants who come with globally transferable skills may not stay long in the destination country, especially when they see the economic rent decline as time passes; they have the ability to move to another country to pursue better opportunities. This mobility pattern may

lead to a gradual reduction in the observed immigrants' average wages by leaving behind those who are less able to receive higher wages elsewhere. The selection bias can also reflect the growing costs of return migration over time. The immigrants who stay in the host country are likely to form families or establish new personal networks and it becomes more difficult for them to move back or onward.

CM found evidence of negative assimilation for some English-speaking immigrants in the United States and Australia, and for some Scandinavian language-speaking immigrants in Sweden, using the U.S. Census, the Australian Census, and the SIEPS (Swedish Institute for European Policy Studies) database.

One may wonder whether English-speaking immigrants to Canada also show negative assimilation. There are both similarities and differences between the Canadian and the U.S. immigrant labour markets. Canada and the U.S. are similar in many fundamental aspects, such as having democratic governments, having English as primary language (although the U.S. and Canada have significant minorities of Spanish-speakers and French-speakers respectively), being both former British colonies from which they share many fundamental beliefs and ideas, and being both large immigration countries. However, they are also different in their immigration policies, labour market institutions and social protection systems. Canadian immigration policy in recent decades has been based on a "point system", whose goal is to match the inflow of skilled immigrants to the observed shortages of the Canadian labour market. It is different from the family reunification emphasis of the U.S. immigration policy. The differences between the policies of the two countries affect the composition of immigration by source country and the self-selection behaviour of immigrants. In addition to the differences in immigration policy, structural and institutional dissimilarities in the labour markets of the two countries are likely to

influence the type of immigrants who are attracted to each destination. With better-established labour unions, higher minimum wages, and more generous national health insurance, employment insurance and welfare systems, workers in the lower end of the income distribution are generally better off in Canada than in the United States (Borjas, 1993; Gregory and Daly, 1994; Antecol, Cobb-Clark and Trejo, 2001).

Furthermore, although both countries have experienced a widening in income inequality over the past three decades, in the United States real incomes have fallen dramatically for less-skilled workers, whereas, in Canada, the decline in the bottom half of the income distribution has been much more moderate (Freeman and Katz, 1994; Ross et al., 2000; Foster and Wolfson, 2010).

This paper tests the negative assimilation hypothesis with a sample of United States and United Kingdom immigrants in Canada. We use four databases: the 1991, 2001 and 2006 Canadian censuses, and the 2011 National Household Survey. This time period partly overlaps the one of CM, who studied the years 1980, 1990 and 2000, but it also contains the more relevant recent period. Furthermore, the U.S. and U.K. immigrants are compared to Chinese immigrants, a representative group of non-English speaking immigrants from a less developed country for which we expect positive assimilation. Unlike CM who did their analysis only for males, we consider both males and females separately as well as in regressions for both genders combined. The factors that lead to negative assimilation may differ between male and female immigrants and it is interesting to compare their estimated assimilation rates.

From this analysis, we find that negative assimilation does *not* occur in the Canadian labour market. The result for the U.K. immigrants is that the assimilation rate is at the border between positive and negative assimilation. For the U.S. immigrants, there is a significant

positive assimilation, but the rate is much lower than that of the comparison group of Chinese immigrants.

The next section of this paper introduces the data, the variables and the models that are estimated. The core part of the analysis presents the results. This is followed by a discussion of the possible explanations of our findings. The last section is a conclusion that summarizes the key findings of this study.

Data and Methodology

We employ the public use microdata on individuals from the 1991, 2001 and 2006 Canadian censuses, and from the 2011 National Household Survey (NHS).¹ We focus on the United States, United Kingdom and Chinese immigrants to test whether “negative” assimilation exists in the Canadian labour market. The data include individuals aged 25 to 64 years who reported having positive wages and salaries during the year preceding the data collection. Our model is based on the standard concept of economic assimilation and is specified empirically as in Chiswick (1978), CM and many others. The dependent variable is the natural logarithm of individual earnings during the previous year.²

The model stipulates that human capital accumulated in the host society, commonly measured as the number of years since migration (YSM), is a key predictor of immigrant earnings. In the Canadian data, the variable YSM is derived from the information on the year during which an immigrant landed. Unlike the U.S. public use data used by CM in which the

¹ We do not use the restricted confidential microdata for this research since the groups of immigrants and the variables that we use are clearly identified in the public use data. Since the groups of immigrants that we are analyzing are important within the immigrant populations, the sample sizes that we have are large enough to do a satisfactory analysis.

² Very low wages (less than \$500 a year) and very large wages (more than \$200,000 a year) are dropped to minimize the problem of outliers in the data.

number of categories for period of immigration is small, the Canadian data provide single years of landing for the recent immigrants and groupings of two- to five-year categories for most of the older immigrants. The groupings are not exactly the same for all data sets, but they fine enough not to cause major problems in estimating the number of years since migration.³

The other variables in our model are the usual ones of the human capital earnings function. We use years of schooling⁴ and potential experience (defined as age minus schooling minus 6) and its square.. Marital status is a dummy variable that takes the value one if someone is currently married or living with a common-law partner, and the value zero otherwise.

Gender is another dummy variable taking the value of one for females and the value of zero for males. Unlike CM who did their analysis only for males, our regressions are done separately for each gender and for both genders together. Actually, adding women to the analysis may provide interesting insight in the context of the negative assimilation hypothesis. If we believe that males are the principal workers in the migration decisions and that females are secondary workers in the family, then we would expect the negative assimilation hypothesis to apply less to females than to males. This is because migration is less an investment in human capital for females than for males. However, given the trend towards gender equality (at least for the recent periods), it may no longer be true that females play a subsidiary role in the family. Therefore, we also do our analysis for both genders together.

³ More precisely, counting both single and multiple year categories, there are 27 categories for year of immigration in the 1991 census, 36 in the 2001 census, 34 in the 2006 census and 29 in the 2011 NHS. In 1991 and 2001, there is an exception for people living in the Atlantic Provinces where the number of categories are respectively 4 and 8. However, this is not a major problem since a very small number of immigrants reside in those provinces. When the period of immigration is a range of years, we took the midpoints of the period to estimate years since migration.

⁴ Schooling is measured in years in the 1991 and 2001 censuses, but in 2006 and 2011, it is measured in levels. We assigned a number of years based on the highest degree received. From the variable *hdgree* in the codebook we have : (*hdgree*=1) 8 years, (*hdgree*=2) 12 years, (*hdgree*=3,4,5) 13 years, (*hdgree*=6,7) 14 years, (*hdgree*=8) 15 years, (*hdgree*=9) 16 years, (*hdgree*=10) 17 years, (*hdgree*=12) 18 years, (*hdgree*=11,13) 22 years. To make that variable comparable across all our data sets, we also used that definition for 1991 and 2001.

Since the dependent variable is the annual earnings, independent variables for the amount of time worked must be included. Therefore, the log of the number of weeks worked during the year and a dummy variable for part-time versus full-time during the previous year are also included. To account for language skills, a dummy variable is included for individuals who are bilingual in English and French. Finally, a set of dummy variables is included to represent the province or region of residence within Canada (with Ontario as the reference category).

The crucial coefficients of our analysis are those of the variable YSM. In the traditional model, the effect of YSM is specified as a quadratic equation, where the coefficient of YSM is expected to be positive, and the coefficient of YSM squared is expected to be negative, implying that immigrants' earnings improve at a decreasing rate with duration in the host country. This is the traditional pattern of positive assimilation. As in CM, we also specify a simpler model in which YSM enters only linearly. This provides a more direct and straightforward measure of assimilation. If the coefficient of YSM is negative and significant, it shows evidence of negative assimilation, earnings declining with the passage of time in the destination country. This is what CM found with English speaking immigrants in the U.S.

We run the regressions for the two countries from which English-speaking immigrants in our sample originate -- the U.S. and the U.K., first together and then separately for the U.S. and the U.K. This is accompanied with a regression on Chinese immigrants as a point of comparison with the previous two countries. As we expect positive assimilation for the Chinese immigrants, we can see by how much the assimilation rates in the U.S. and U.K. differ from those of a typical developing country.

Descriptive Statistics

Table 1 reports the mean values of some key variables for the various sub-samples. There are substantial differences in wages between workers born in the two developed countries and those born in China. For example, immigrants from the U.K. and the U.S. earn on average \$57.1 thousands and \$52.4 thousands per year respectively in 2011, while the immigrants from China earn only \$39.4 thousands per year. Similar differences are observed in the earlier years. The average age of the U.S. and U.K. immigrants increases during the period, reflecting the general ageing of the population, while the Chinese immigrants' average age remained relatively constant. The average U.S. immigrant in 2011 has about 15 years of schooling and it did not change much during the period. The same is true for the U.K. immigrants with a slightly lower level of schooling. In contrast, the education of the Chinese immigrants increased substantially during the period, an indication of the immigration policy that favoured highly skilled immigrants. The U.S. and U.K immigrants have been in Canada longer than the Chinese immigrants, around 30 years on average in 2011, compared to only 13 years for the Chinese. Over the period, the average number of years since migration increased for the U.S. and U.K. immigrants, while it decreased for the Chinese immigrants.

Table 1. Means of some of the Variables in the Earnings Function, 25 to 64-Year-Old Immigrants with positive earnings from the U.S., the U.K., and China, 1991, 2001 and 2006 Census of Canada, 2011 National Household Survey.

Variables	US immigrants				UK immigrants				Chinese immigrants			
	1991	2001	2006	2011	1991	2001	2006	2011	1991	2001	2006	2011
Earnings in constant 2011 dollars	46712	49045	49310	52441	51470	52978	53657	57149	35454	33126	32982	39396
age	41.3	44.3	46.3	47.4	44.5	47.0	48.8	49.5	45.4	42.7	42.8	43.4
Years of schooling	14.5	14.8	14.7	14.8	13.2	13.4	13.8	14.1	11.7	13.5	14.3	14.7
Years Since Migration (YSM)	20.0	24.7	27.2	29.2	25.0	30.1	33.2	33.9	16.1	12.2	12.1	13.3
Weeks worked	44.4	45.8	45.07	45.0	46.5	46.77	45.6	45.4	45.0	42.6	42.2	43.0
Part-time	.172	.207	.189	.186	.142	.160	.159	.158	.097	.132	.135	.138
Married	.777	.764	.825	.796	.794	.764	.798	.777	.870	.854	.851	.818
Gender (female)	.520	.561	.538	.544	.466	.471	.476	.483	.434	.485	.490	.506
bilingual	.148	.166	.157	.166	.098	.093	.089	.094	.023	.025	.021	.027
Atlantic	.079	.083	.054	.046	.032	.031	.014	.021	*	*	.0004	.003
Quebec	.089	.089	.100	.092	.029	.025	.025	.022	.063	.061	.073	.074
Ontario	.421	.413	.427	.451	.600	.573	.575	.564	.438	.513	.518	.519
Prairies	.054	.054	.039	.040	.039	.039	.028	.025	.043	.021	.006	.017
Alberta	.125	.129	.116	.129	.095	.114	.120	.131	.116	.093	.089	.099
BC	.232	.232	.265	.241	.205	.220	.238	.237	.340	.312	.313	.287
Sample size	3,538	3,220	2,560	2,320	11,087	8,365	6,064	5,285	2,203	3,962	4,893	6,589

- **Atlantic:** Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick;
- **Prairies:** Manitoba, Saskatchewan;
- * : Asterisk indicates that the variables are not available;
- **Source:** Censuses of Population of Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

Among the other characteristics, the number of weeks worked is similar for all groups of immigrants, but the U.K. and U.S. immigrants are more likely to work part-time. The U.S. and

U.K. immigrants are less likely to be married than the Chinese ones. They are also more likely to be bilingual in English and French than the Chinese immigrants. Finally, the majority of immigrants live in the larger provinces of Ontario, British Columbia and Alberta. However, among the U.S. immigrants, a slightly larger proportion lives in Quebec and in the Atlantic Provinces.

Looking at the sample sizes, there were more than six thousand immigrants from China in our sample in 2011, more than five thousand from the U.K. and more than two thousand from the U.S.⁵. The numbers differ across the period, reflecting the changes in the composition of immigration and the ageing of the U.S. and U.K. immigrants who belong to earlier cohorts. In 1991, there were about two thousand immigrants from China in our sample, eleven thousand from the U.K. and three and a half thousands from the U.S.

Estimation of Assimilation rates

We focus on the assimilation rates, that is, the coefficients of YSM in the human capital earnings regressions. All the regressions control for education, labour market experience and its square, whether currently married or common-law, the log of weeks worked, whether the respondent works full-time or part-time, whether bilingual or not, and place of residence. We do not discuss the coefficients of those variables as they are in line with those usually reported in the literature. Full regressions results are reported in Appendix tables A1 (U.S. and U.K. immigrants) and A2 (Chinese immigrants) for our sample that combines both genders.⁶

⁵ The sample proportions of the public use data are: Censuses of Population of Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

⁶ Other regressions can be obtained from the authors.

Table 2 reports the coefficients of the years since migration variables for the U.S. and U.K. immigrants, along with the t-statistics. Two specifications are reported: the usual one with YSM and YSM squared, and the simpler one with a linear YSM. The model is estimated in turn for males, females, and both genders. In this specification, both countries of origin are put together and a dummy variable is included to show if there is any gap between U.K. and U.S. immigrants.

The most striking result is that, unlike CM's finding, there is no evidence of negative assimilation in any of our sub-samples. The linear specifications show that assimilation rates are positive but small. For the male sample, in all four data bases, immigrants from the U.S. and the U.K. assimilate at a slow rate (between 0.1% and 0.2% per year) in the linear specification, but the coefficients are not statistically significant at the 5% level. The quadratic specification shows that, except for 1991, the usual concave pattern prevails for males, with significant coefficients. In the female sample, the assimilation rates in the linear specification are statistically significant and higher than those of males, although still small, between 0.2% and 0.6% per year. The quadratic specification also exhibits the standard concave pattern in all years. The both gender sample confirms the previous results, with a small but positive assimilation rate of U.S. and U.K. immigrants.

Another interesting result is that the U.K. immigrants earn more than the U.S. immigrants. For males, the gap is between 11% and 13%. For females, it is smaller, between 4% and 9%. This may reflect differences in which immigrants are selected in the two countries.

Table 2. Coefficients of years since migration (YSM) in earnings regressions, quadratic and linear specifications, 25 to 64-Year-Old, immigrants from the U.S. and the U.K., males, females and both genders.

Males								
Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
YSM	.0010 (0.35)	.001 (1.36)	.007 (2.32)	.001 (1.42)	.011 (3.72)	.002 (1.63)	.010 (3.57)	.001 (0.52)
YSM ² / 100	.0002 (0.03)	*	-.010 (1.98)	*	-.016 (3.37)	*	-.017 (3.60)	*
UK	.129 (6.98)	.129 (6.99)	.124 (5.33)	.123 (5.29)	.113 (4.27)	.111 (4.18)	.138 (5.03)	.133 (4.84)
Adj R ²	0.364	0.364	0.337	0.336	0.345	0.344	0.316	0.313
Sample Size	7,617	7,617	5,844	5,844	4,361	4,361	3,792	3,792
Females								
Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
YSM	.009 (2.78)	.002 (2.66)	.010 (3.15)	.003 (2.77)	.016 (5.39)	.006 (6.03)	.009 (2.77)	.004 (3.97)
YSM ² / 100	-.013 (2.09)	*	-.014 (2.42)	*	-.017 (3.57)	*	-.008 (1.56)	*
UK	.043 (2.12)	.046 (2.26)	-.006 (0.27)	-.007 (0.30)	.091 (3.64)	.089 (3.53)	.052 (2.00)	.049 (1.89)
Adj R ²	0.443	0.443	0.381	0.380	0.434	0.433	0.431	0.431
Sample size	7,008	7,008	5,741	5,741	4,263	4,263	3,813	3,813
Both genders								
Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
YSM	.004 (1.86)	.001 (2.49)	.008 (3.64)	.002 (2.70)	.013 (6.27)	.004 (5.07)	.009 (4.24)	.002 (3.04)
YSM ² / 100	-.005 (1.20)	*	-.011 (2.96)	*	-.016 (4.83)	*	-.012 (3.43)	*
UK	.091 (6.59)	.092 (6.66)	.054 (3.28)	.053 (3.23)	.107 (5.86)	.105 (5.76)	.091 (4.80)	.087 (4.59)
Adj R ²	0.492	0.492	0.409	0.408	0.422	0.421	0.405	0.404
Sample Size	14,625	14,625	11,585	1,1585	8,624	8,624	7,605	7,605

- Value of heteroskedasticity-consistent t-statistics in parentheses
- *: Asterisk indicates that the variables is not entered in the regression

- **Notes:** The estimating equations hold constant education, labor market experience and its square, log of weeks worked, whether currently married or common-law, whether the respondent full-time or part-time worker, whether bilingual or not, and place of residence.
- See appendix table A1 for the full sets of result for the both gender sub-sample; other results available from the authors.
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

The previous regressions assumed the same assimilation rates for both the U.K. and the U.S. immigrants. To further examine the potential differences between the two countries of origin, we now consider them separately. Table 3 reports the coefficients of YSM (in the linear specification) for males, females and both genders. There are indeed differences between the two countries. The U.S. immigrants have a small positive assimilation rate for both males and females (sometimes at the margin of statistical significance). Again, there is no evidence of negative assimilation for them. The situation is different for the U.K. For the males, the assimilation rate is not statistically different from zero in any of the data bases. For females, the assimilation rate is consistently positive, but again it is small. Putting those results together, this may provide a little bit of evidence of negative assimilation, or more appropriately, zero assimilation for the U.K. immigrant males. If the negative assimilation model assumes that males are the primary workers in the migration decisions, then we would expect males to have a lower assimilation rate than females, which is what we observe. Overall, in the both gender sample, the U.K. immigrants exhibit a very small positive assimilation rate, but it is only at the margin of statistical significance.

Table 3. Coefficients of years since migration (YSM) in earnings regressions, linear specification, 25 to 64-Year-Old, immigrants from the U.S. and the U.K. separately, males, females and both genders.

Males								
Variable	1991		2001		2006		2011	
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.
YSM	.005 (2.75)	-.0004 (0.51)	.004 (2.20)	.0004 (0.40)	.003 (1.70)	.0008 (0.73)	.003 (1.69)	-.0006 (0.50)
Adj R ²	0.379	0.353	0.325	0.338	0.376	0.328	0.334	0.303
Sample size	1,697	5,920	1,415	4,429	1,184	3,177	1,058	2,734
Female								
Variable	1991		2001		2006		2011	
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.
YSM	.002 (1.16)	.003 (2.57)	.004 (2.04)	.003 (2.34)	.008 (4.47)	.005 (4.33)	.006 (3.38)	.003 (2.69)
Adj R ²	0.472	0.429	0.395	0.376	0.440	0.425	0.405	0.445
Sample size	1,841	5,167	1,805	3,936	1,376	2,887	1,262	2,551
Both genders								
Variable	1991		2001		2006		2011	
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.
Years Since Migration (YSM)	.004 (2.83)	.0008 (1.16)	.004 (2.98)	.001 (1.69)	.006 (4.46)	.003 (3.14)	.004 (3.31)	.001 (1.42)
Adj R ²	0.488	0.490	0.401	0.412	0.441	0.408	0.394	0.407
Sample Size	3,538	11,087	3220	8365	2560	6064	2320	5285

- Value of heteroskedasticity-consistent t-statistics in parentheses
- **Notes:** The estimating equations hold constant education, labor market experience and its square, log of weeks worked, whether currently married or common-law, whether the respondent full-time or part-time worker, whether bilingual or not, and place of residence.
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

Comparisons with Chinese immigrants

To provide a point of comparison to what assimilation rates are expected to be for the majority of immigrants who come from less developed countries, Table 4 reports the same results

for immigrants from China. The quadratic specifications show clearly the usual concave pattern, with all the coefficients (except one) being statistically significant at the 5% level. The linear specification shows high assimilation rates that are between 1% and 2% per year. This is consistent with the assimilation patterns usually observed in the literature. We also note that males and females are very similar to each other in terms of assimilation rates. The results of the both gender sample are almost the same as the ones of each gender separately.

This comparison with Chinese immigrants shows that, although our results do not support the hypothesis of negative assimilation for the U.S. and U.K immigrants, they do not entirely negate the existence of the factors that lead to it. Those factors are just not strong enough to cancel the natural tendency of positive assimilation, as evidenced by the much smaller assimilation rate than the one of the Chinese immigrants. We also found that, for the U.S. and the U.K. immigrants, assimilation rates tend to be higher for females than for males, which is what to expect from the negative assimilation hypothesis if females are secondary workers. We did not find such a difference for Chinese immigrants.

Table 4. Coefficients of years since migration (YSM) in earnings regressions, quadratic and linear specifications, 25 to 64-Year-Old, immigrants from China, males, females and both genders.

Males								
Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
YSM	.043 (7.40)	.011 (6.08)	.041 (7.31)	.020 (10.22)	.042 (8.22)	.020 (10.67)	.020 (4.65)	.013 (7.79)
YSM ² / 100	-.079 (-5.81)	*	-.054 (-4.08)	*	-.057 (-4.70)	*	-.018 (-1.87)	*
Adj R ²	0.395	0.379	0.361	0.356	0.428	0.423	0.347	0.346
Sample size	1,247	1,247	2,040	2,040	2,493	2,493	3,258	3,258
Females								
Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
YSM	.035 (4.85)	.012 (5.33)	.044 (7.92)	.020 (10.54)	.039 (7.86)	.020 (10.87)	.034 (7.59)	.015 (8.90)
YSM ² / 100	-.063 (3.31)	*	-.058 (4.56)	*	-.048 (4.11)	*	-.049 (4.62)	*
Adj R ²	0.379	0.373	0.415	0.409	0.453	0.450	0.423	0.419
Sample size	956	956	1,922	1,922	2,400	2,400	3,331	3,331
Both genders								
Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
YSM	.040 (8.93)	.011 (8.18)	.042 (10.65)	.020 (14.59)	.040 (11.19)	.020 (15.00)	.027 (8.58)	.014 (11.66)
YSM ² / 100	-.071 (6.67)	*	-.056 (6.02)	*	-.052 (6.15)	*	-.033 (4.55)	*
Adj R ²	0.415	0.404	0.400	0.395	0.450	0.446	0.398	0.396
Sample Size	2,203	2,203	3,962	3,962	4,893	4,893	6,589	6,589

- Value of heteroskedasticity-consistent t-statistics in parentheses
- The estimating equations hold constant education, labor market experience and its square, log of weeks worked, whether currently married or common-law, whether the respondent full-time or part-time worker, whether bilingual or not, and place of residence. See appendix table A2 for the full sets of result for the both gender sub-sample; other results available from the authors.
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

Robustness checks

The results so far suggest that, contrary to what was found by CM, the negative assimilation hypothesis does not apply to immigrants in Canada. The closest case to negative assimilation is the one of the U.K. immigrant whose assimilation rate is very small and actually virtually zero for males. In this section, we provide further tests of our main results.

As noted by CM, the negative assimilation hypothesis, which implies that immigrants get an initially large wage offer which does not persist in the long run, is more relevant for those who arrived as adults than for those who arrived as children. Therefore, we divide our samples in two groups: immigrants who arrived at age 20 years old or more, that is, in their working ages, and those who arrived at age less than 20 years old. For this analysis, we focus on the both gender samples⁷ and the results are reported in Table 5. Again, there is no evidence of negative assimilation; furthermore, assimilation rates are sometimes higher for the immigrants who arrived as adults than for those who arrived as children, contrary to what the negative assimilation hypothesis would predict.

⁷ We also did the estimations for genders separately and they support the results that we report in this section.

Table 5. Coefficients of years since migration (YSM) in earnings regressions, linear specification, 25 to 64-Year-Old, immigrants from the U.S. and the U.K. separately, immigrants who arrived at age 20 or younger, and immigrants who arrived after age 20, both genders.

Arrived at age less than 20								
Variable	1991		2001		2006		2011	
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.
Years Since Migration (YSM)	.003 (0.99)	-.002 (1.31)	.006 (1.90)	.0008 (0.40)	-.002 (0.44)	.004 (1.91)	.005 (1.24)	.001 (0.66)
Adj R ²	0.468	0.491	0.474	0.394	0.392	0.420	0.319	0.413
Sample Size	1,249	4,482	1,385	4,523	1,144	3,532	1,153	3,251
Arrived at age 20 or more								
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.
Years Since Migration (YSM)	.004 (1.57)	.006 (4.36)	.00010 (0.03)	.006 (3.05)	.009 (3.42)	.007 (3.11)	.001 (0.35)	.002 (0.86)
Adj R ²	0.499	0.490	0.357	0.433	0.475	0.395	0.455	0.404
Sample Size	2,289	6,605	1,835	3,842	1,416	2,532	1,167	2,034

- Value of heteroskedasticity-consistent t-statistics in parentheses
- The estimating equations hold constant education, labor market experience and its square, log of weeks worked, whether currently married or common-law, whether the respondent full-time or part-time worker, whether bilingual or not, and place of residence.
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

Another matter is related to language. In our sample, we found that the large majority of immigrants from the U.S. and the U.K. use an official Canadian language at home. However, French plays an important role in the labour market in Quebec. To provide an environment where English is the main labour market language, we redid the estimations by excluding the immigrants who reside in Quebec. The results are reported in Table 6. Comparing the sample

sizes to those of Table 3, we can see that the large majority of the immigrants from the U.S. and the U.K. live in the English-speaking provinces. Not surprisingly, the results of Table 6 are very similar to those of Table 3 and do not support the negative assimilation hypothesis.

Table 6. Coefficients of years since migration (YSM) in earnings regressions, linear specification, 25 to 64-Year-Old, immigrants from the U.S. and the U.K. separately, both genders, excluding Quebec.

Variable	1991		2001		2006		2011	
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.
Years Since Migration (YSM)	.004 (3.10)	.0008 (1.11)	.004 (3.07)	.001 (1.63)	.006 (4.39)	.002 (2.97)	.004 (3.04)	.001 (1.31)
Adj R ²	0.485	0.487	0.397	0.407	0.440	0.410	0.394	0.405
Sample Size	3,222	10,766	2,932	8,160	2,305	5,913	2,106	5,168

- Value of heteroskedasticity-consistent t-statistics in parentheses
- The estimating equations hold constant education, labor market experience and its square, log of weeks worked, whether currently married or common-law, whether the respondent full-time or part-time worker, whether bilingual or not, and place of residence.
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

Finally, as has been shown by Borjas (1985) and many others, assimilation rates estimated from a single cross-sectional data set may not be representative of the true assimilation if the cohorts of immigrants that arrived at different points in time differ in their unobserved attributes. For Canadian immigrants in general, it has been shown that the “quality” of the various cohorts has been decreasing over time (Bloom, Grenier and Gunderson, 1995), which would tend to overestimate the coefficients of YSM in cross-sectional regressions. As a further check, Table 7 shows regression results with pooled samples from the four data sets. We provide estimates for the both gender sample, U.S. and U.K. combined, with the data pooled in two different ways. As

in CM, we proceed in this manner since the results may depend on the choice of the pooled data sets. In the first one, we pool all four data sets (1991, 2001, 2006 and 2011), and the second one we pool on only three of them (2001, 2006 and 2011). A set of five-year cohort dummy variables is added to our earlier specification, with the pre-1961 cohort as the reference group. Interestingly, we do not find evidence of the deterioration of cohort quality for the U.K. and U.S. immigrants. On the contrary, all the later cohorts do better than the reference one. This is similar to what CM found for English speaking immigrants in the U.S. Therefore, there is no evidence of overestimation of the assimilation rates in cross-sectional data. The evidence is rather the contrary, that the rates are underestimated. In the linear specifications, the two pooled samples indicate assimilation rates of 0.4% and 0.7%, which are higher than those reported in Table 2 (except for 2006 where it is the same). Therefore, this cohort analysis supports our results of the absence of negative assimilation for the English speaking immigrants in Canada.

Table 7. Coefficients of entry cohorts and of years since migration in pooled earnings regressions, quadratic and linear specifications, 25 to 64-Year-Old, immigrants from the U.S. and the U.K., both genders.

Variable	1991+2001+2006+2011		2001+2006+2011	
	US&UK		US&UK	
	Quadratic	Linear	Quadratic	Linear
constant	6.222 (132.42)	6.293 (139.08)	5.983 (75.89)	6.120 (83.04)
cohort196165	.012 (0.77)	.031 (2.07)	.040 (1.60)	.082 (3.54)
cohort196670	.012 (0.88)	.033 (2.60)	.034 (1.46)	.085 (4.16)
cohort197175	.040 (2.82)	.061 (4.40)	.099 (3.76)	.153 (6.47)
cohort197680	.054 (3.39)	.072 (4.61)	.106 (3.60)	.155 (5.69)
cohort198185	.085 (4.51)	.092 (4.86)	.163 (4.84)	.198 (6.06)
cohort198690	.071 (3.33)	.062 (2.92)	.176 (4.67)	.187 (4.99)
cohort199195	.100 (3.85)	.088 (3.38)	.249 (5.63)	.221 (5.04)
cohort19962000	.110 (3.64)	.071 (2.41)	.292 (5.61)	.220 (4.42)
cohort200105	.061 (1.84)	.011 (0.35)	.255 (4.54)	.164 (3.11)
cohort200610	.149 (3.86)	.089 (2.39)	.358 (5.78)	.245 (4.27)
Gender (female)	-.313 (42.69)	-.313 (42.67)	-.257 (27.71)	-.257 (27.68)
UK	.086 (10.38)	.087 (10.47)	.085 (8.17)	.085 (8.25)
YSM	.011 (7.83)	.004 (7.53)	.019 (6.84)	.007 (6.83)
YSM²/ 100	-.012 (-5.57)	*	-.019 (-4.71)	*
Adj R²	0.436	0.436	0.411	0.410
Sample size	42,439	42,439	27,814	27,814

- Value of heteroskedasticity-consistent t-statistics in parentheses
- *: Asterisk indicates that the variables is not entered in the regression

- The estimating equations hold constant education, labor market experience and its square, log of weeks worked, whether currently married or common-law, whether the respondent full-time or part-time worker, whether bilingual or not, and place of residence.
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

Potential explanations

The U.K. and the U.S. are as developed countries as Canada, and the skills that immigrants bring to Canada are expected to be valued highly when they first arrive. However, we failed to confirm the “negative” assimilation hypothesis in the Canadian labour market. We discuss some possible reasons for the U.S. and U.K. immigrants respectively.

The U.S.

Although the U.S. immigration policy is known to emphasize family reunification, in the context of a growing worldwide competition for global talent, the winner is still the U.S., which has the ability to attract PhDs and graduates not only from emerging countries, but also from Europe and Canada. Some emerging economies are also successful in attracting highly skilled migrants, while they continue to experience significant outflows of high-skilled workers. Canada, with a centralized and clear immigration program for professionals, attracted many skilled immigrants from the rest of the world. However, at the same time, vigorous debates took place across the country about the migration of highly skilled Canadians to the United States. This “brain drain” was an important issue of the 1990s, but it has now largely died out (Davies, Mueller and Winer, 2013). Although the recent facts suggest that Canadians need not worry about the brain drain anymore, the assimilation rates estimated in this study and those of CM

may reflect a situation of the past, where many highly skilled Canadians received well-paid offers from U.S. employers.

We know that even if the point system used in Canada might be particularly effective at selecting immigrants at the top of the education distribution, the skilled immigrants to the U.S. are more likely than those to Canada to possess exceptionally high capacities. Canadians, on average, earn less than Americans, so the U.S. attracts a large number of talented Canadians who want to enjoy higher wages and lower taxes. Based on this background, even though its immigration policy does not emphasize skills as much as the Canadian one, the U.S. has a highly competitive labour market and strong polarization, and only the very best among the highly skilled people may find an advantage to move there. This could explain the negative assimilation results for Canadian immigrants to the U.S. found by CM. In contrast, with a more equal society and a more peaceful social and economic environment, Canada may also attract some U.S. immigrants for its less aggressive life. Americans are attracted by their perspective of Canada's more liberal culture, such as the universal public health-care system, more rigorous gun control laws, positive attitudes toward gays and lesbians and multiculturalism (Hardwick, 2010).

In addition, the high Canadian tax rates, the complex and multi-jurisdictional regulations of the Canadian economy and the low value of the Canadian dollar, at least during some periods (such as the 1990s), are still an obstacle for the highly talented U.S. people to have the willingness to move to Canada. Thus, the people who want to migrate to Canada might be from the less-highly capable class, or from those who experience a hard time to find a job in the U.S.

Some U.S. immigrants also came to Canada during periodic economic recessions (such as the early 1980s and the early 2000s). Thus, they may not have received the high initial wages that is assumed by the “negative” assimilation hypothesis. Borjas (1993) noted: “In general,

Canadian immigrants in the United States do quite well in the labor market. The most recent arrivals enumerated in the 1980 census earn about 20 percent higher wages than American natives and have about two more years of schooling. In contrast, American immigrants in Canada are less successful. The most recent arrivals enumerated in the 1981 census earn 4.5 percent less than Canadian natives, yet have 4.5 years more schooling” (Borjas, 1993, page 37). In his previous work, Borjas argued that the return migration propensity and the skill mix of immigrants are the main determinants of the skill composition of immigrant flows (Borjas, 1987). The evidence indicates that the Canadian income distribution is more compressed than that of the United States, so that high-skilled Canadians are likely to have a greater motivation to migrate to the United States than low-skilled Canadians (McWatters and Beach, 1989). This can explain why the low-skilled Americans may have higher willingness to come to Canada than the high-skilled ones. The self-selection generated by the differential economic opportunities available to skilled and unskilled workers in the two countries greatly dilutes the expected impact of Canada's point system, which is supposed to bring highly skilled talents.

There is also an interesting phenomenon: “Every four years, like clockwork, disillusioned Americans make the same tired threat: if their presidential candidate of choice does not win, then, screw it, they are moving to Canada. While the vast majority of them do not, there has been a measurable increase in the number of both American and British immigrants coming to Canada over the last decade. Now those increases could pick up even more, thanks to a change in Canada’s immigration rules” (Melanson, 2013). The dissatisfaction with the government is also a reason for U.S. immigrants to come to Canada. “By 2006, Statistics Canada reported that the highest number of Americans had moved to Canada in over 30 years, with a 20 percent increase over the previous year and almost double the number who had arrived five years earlier [. . .]

This period corresponds closely with the US presidential election of George W. Bush in 2000 and his subsequent re-election four years later” (Hardwick 2010, page 91).

The U.K.

Our results show that the U.K. immigrants are doing well in the Canadian labour market. It might be because of the long history of the British-friendly environment in Canada. As a former British colony, Canada was familiar and welcoming to them. The U.K. primary language is English and their lifestyle was not entirely “foreign”. The U.K. immigrants in Canada might have difficulty adjusting to the climate and to the greater degree of equality in society, but they were familiar not only with the dominant language, but also with the political institutions and the legal system. They were seen as culturally similar to Canadians. The U.K. immigrants in Canada were “invisible immigrants”, much more than would probably have been the case in the U.S. (Erickson and Gables, 1972).

The U.K. was considered distinct from the other countries’ immigrants by the early writers that studied immigrant assimilation. Most of the early commentators suggested that the U.K. immigrants were most likely able to fit into the Canadian labour market on terms similar to the native-born English-speaking Canadians. Thus, most British immigrants arrived with, or rapidly developed, skills that allowed them to fit into the better-paid end of the Canadian labour market. To the extent that many Canadian-born were the children or grandchildren of earlier generations of British immigrants, it is not surprising that their relatives arriving in the 20th century assimilated easily.

Canadian studies tend to find that until about 1970, immigrants in Canada were at less of an initial disadvantage than more recent immigrants were, but that they also experienced

relatively lower rates of assimilation than during the later years (Baker and Benjamin, 1994; Bloom, Grenier and Gunderson, 1995). For example, using data for 1971, Bloom, Grenier and Gunderson (page 994) estimate that the assimilation rate of immigrants to Canada was 0.35% per year, while it was 0.84% in 1986. Those earlier immigrants were mainly from Britain and Northwestern Europe. The very low assimilation rate that we estimated for the British immigrants may reflect that earlier situation.

British immigrants to Canada formed a much larger proportion of the total stream of immigration to Canada than to the United States. However, there is very limited information on the types of British immigrants moving to Canada rather than the U.S. It is possible that Canada attracted English immigrants with less human capital than did the United States (Fitzpatrick, 1980, page 131).

All these phenomena above may explain why the U.K. immigrants in Canada did not show “negative” assimilation as they did in the U.S. labour market. However, unlike most other immigrants, there is no sign of positive assimilation either. Thus, as “invisible” migrants who have been in Canada for a relatively long time, the U.K. immigrants live as native-born Canadians.

Summary and Conclusion

The policy and structural differences between the Canadian and U.S. labour markets provide suitable conditions to study the existence of “negative” assimilation for Canadian immigrants. The standard labour market adjustment literature on immigration has focused on the positive assimilation hypothesis. However, the “negative” assimilation hypothesis under the assumption of highly transferable skills concludes that immigrants may go through decreasing

wages as the time spent in the host country goes on. In the Chiswick and Miller (2011) model, negative assimilation happens in the context of similar earnings, cultures, and labour market institutions, which are the conditions of highly transferable skills. The Canadian labour market provides a counter example to the negative assimilation hypothesis.

Based on data from the 1991, 2001 and 2006 Canadian censuses, as well as from the 2011 National Household Survey for immigrants from English-speaking developed countries – the U.S. and the U.K., the analyses did not find evidence of negative assimilation for those immigrants. This is contrary to what Chiswick and Miller (2011) found for English-speaking immigrants in the United States. That kind of migration takes place when a worker gets a job offer that provides higher earnings than that of the native born. Afterwards, with the passage of time, the economic rent diminishes and earnings undergo a relative decline. This does not seem to be the case for Canada: as an immigrant friendly country, the fact that immigrants usually come before they receive a high wage work offer in Canada might be an important reason to explain the absence of negative assimilation. Furthermore, Canada's sound social protection system may induce most of the immigrants to choose to stay once they settle down in Canada.

Appendix

Table A1. Regression of Immigrant Earnings, quadratic and linear YSM, 25 to 64-Year-Old Immigrants from U.S. & U.K., both genders, 1991, 2001, 2006 Census of Canada, 2011 National Household Survey

Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
Constant	6.026 (93.51)	6.046 (96.87)	6.295 (72.85)	6.357 (75.83)	5.844 (56.80)	5.909 (57.87)	6.437 (58.14)	6.502 (59.56)
Education (edu)	.062 (29.99)	.062 (30.00)	.0625 (25.78)	.0623 (25.70)	.0752 (23.96)	.0748 (23.82)	.0747 (21.92)	.0738 (21.69)
Experience (exp)	.028 (12.53)	.028 (12.66)	.024 (7.58)	.024 (7.81)	.028 (7.25)	.032 (8.20)	.031 (7.62)	.033 (8.32)
Exp²/100	-.044 (10.21)	-.045 (10.36)	-.040 (6.69)	-.041 (6.97)	-.050 (6.92)	-.056 (7.97)	-.056 (7.59)	-.061 (8.38)
Log Weeks Worked (lnweeks)	.806 (61.06)	.806 (61.15)	.773 (45.05)	.775 (45.17)	.820 (40.95)	.825 (41.20)	.082 (3.93)	.726 (34.25)
Part-time (parttime)	-.789 (46.38)	-.789 (46.40)	-.813 (40.71)	-.813 (40.70)	-.880 (38.38)	-.879 (38.30)	-.921 (37.60)	-.922 (37.61)
Married	.079 (5.61)	.078 (5.57)	.134 (8.04)	.132 (7.93)	.132 (6.52)	.126 (6.24)	.082 (3.93)	.078 (3.75)
Gender (female)	-.423 (35.73)	-.423 (35.73)	-.312 (21.37)	-.312 (21.35)	-.224 (13.63)	-.223 (13.54)	-.214 (12.23)	-.211 (12.08)
bilingual	.062 (3.20)	.063 (3.22)	.067 (2.71)	.068 (2.74)	.026 (0.91)	.026 (0.90)	-.014 (0.48)	-.012 (0.42)
Atlantic	-.1912 (6.82)	-.1909 (6.81)	-.263 (7.58)	-.261 (7.55)	-.173 (3.37)	-.164 (3.19)	-.185 (3.60)	-.181 (3.53)
Quebec	-.094 (3.18)	-.095 (3.20)	-.140 (3.58)	-.143 (3.65)	-.124 (2.96)	-.126 (3.00)	-.021 (0.44)	-.024 (0.51)
Prairies	-.154 (5.46)	-.154 (5.46)	-.201 (5.74)	-.202 (5.77)	-.123 (2.68)	-.122 (2.65)	-.016 (0.32)	-.013 (0.26)
Alberta	-.101 (5.29)	-.100 (5.29)	-.098 (4.34)	-.096 (4.27)	-.047 (1.85)	-.048 (1.90)	.126 (4.82)	.123 (4.71)
BC	-.090 (6.27)	-.089 (6.25)	-.063 (3.56)	-.063 (3.58)	-.067 (3.47)	-.068 (3.53)	-.040 (1.89)	-.041 (1.98)
Years Since Migration (YSM)	.004 (1.86)	.001 (2.49)	.008 (3.64)	.002 (2.70)	.013 (6.27)	.004 (5.07)	.009 (4.24)	.002 (3.04)
YSM²/ 100	-.005 (1.20)	*	-.011 (2.96)	*	-.016 (4.83)	*	-.012 (3.43)	*

UK	.091 (6.59)	.092 (6.66)	.054 (3.28)	.053 (3.23)	.107 (5.86)	.105 (5.76)	.091 (4.80)	.087 (4.59)
Adj R²	0.492	0.492	0.409	0.408	0.422	0.421	0.405	0.404
Sample Size	14,625	14,625	11,585	11,585	8,624	8,624	7,605	7,605

- Value of heteroskedasticity-consistent t-statistics in parentheses
- *: Asterisk indicates variables are not available;
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF;
National Household Survey Canada: 2011 2.7% PUMF.

Table A2. Regression of Immigrant Earnings, quadratic and linear YSM, 25 to 64-Year-Old Immigrants from China, both genders, 1991, 2001, 2006 Census of Canada, 2011 National Household Survey

Variable	1991		2001		2006		2011	
	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear
Constant	5.943 (36.71)	5.878 (36.02)	6.098 (50.10)	6.108 (49.96)	5.567 (48.46)	5.618 (48.85)	6.145 (61.24)	6.183 (61.73)
Education (edu)	.057 (11.66)	.058 (11.64)	.058 (14.92)	.055 (14.18)	.079 (20.52)	.076 (19.85)	.077 (22.38)	.076 (22.21)
Experience (exp)	.030 (4.54)	.039 (5.85)	.006 (1.09)	.012 (2.45)	-.008 (1.80)	-.005 (1.04)	.009 (2.22)	.012 (3.21)
Exp²/100	-.059 (5.12)	-.074 (6.58)	-.023 (2.36)	-.034 (3.66)	.008 (0.89)	.002 (0.19)	-.020 (2.53)	-.026 (3.47)
Log Weeks Worked (lnweeks)	.710 (20.87)	.743 (21.85)	.768 (32.45)	.793 (33.90)	.873 (37.96)	-.029 (0.94)	.746 (37.12)	.754 (37.57)
Part-time (parttime)	-.466 (9.02)	-.465 (8.91)	-.567 (15.02)	-.567 (14.98)	-.665 (20.31)	-.665 (0.21)	-.741 (25.46)	-.741 (25.44)
Married	.037 (0.84)	.042 (0.93)	.006 (0.18)	-.009 (0.27)	-.012 (0.39)	-.029 (0.94)	.030 (1.19)	.024 (0.93)
Gender (female)	-.238 (7.78)	-.214 (6.97)	-.178 (7.04)	-.180 (7.10)	-.099 (4.53)	-.099 (4.50)	-.117 (6.01)	-.115 (5.93)
bilingual	.197 (1.95)	.201 (1.96)	-.069 (0.81)	-.053 (0.61)	-.025 (0.30)	-.007 (0.09)	.080 (1.27)	.087 (1.37)
Atlantic	*	*	*	*	-.031 (0.06)	-.056 (0.11)	.447 (2.46)	.413 (2.27)
Quebec	-.350 (5.50)	-.350 (5.44)	-.299 (5.33)	-.300 (5.33)	-.234 (5.20)	-.241 (5.34)	-.271 (6.81)	-.275 (6.90)
Prairies	-.354 (4.81)	-.366 (4.93)	-.310 (3.56)	-.325 (3.72)	-.144 (1.05)	-.150 (1.09)	-.050 (0.68)	-.076 (1.03)
Alberta	-.224 (4.67)	-.223 (4.62)	-.111 (2.50)	-.094 (2.11)	.011 (0.27)	-.0003 (0.01)	.184 (5.58)	.172 (5.23)
BC	-.051 (1.52)	-.058 (1.71)	-.051 (1.80)	-.049 (1.72)	-.102 (4.15)	-.106 (4.30)	-.053 (2.38)	-.059 (2.64)
Years Since Migration (YSM)	.040 (8.93)	.011 (8.18)	.042 (10.65)	.020 (14.59)	.040 (11.19)	.020 (15.00)	.027 (8.58)	.014 (11.66)
YSM²/ 100	-.071 (6.67)	*	-.056 (6.02)	*	-.052 (6.15)	*	-.033 (4.55)	*
Adj R²	0.415	0.404	0.400	0.395	0.450	0.446	0.398	0.396
Sample Size	2,203	2,203	3,962	3,962	4,893	4,893	6,589	6,589

• Value of heteroskedasticity-consistent t-statistics in parentheses

- *: Asterisk indicates variables are not available;
- **Source:** Censuses of Population Canada: 1991 3% PUMF; 2001 2.7% PUMF; 2006 2.7% PUMF; National Household Survey Canada: 2011 2.7% PUMF.

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