

**Adjusting for Human Capital Quality Differences in the Immigrant
Wage Gap in Quebec and the Rest of Canada**

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Abstract

In this article, I employ the Blinder-Oaxaca decomposition method to study the immigrant wage gaps in Quebec and the Rest of Canada. In similar manner to Coulombe, Grenier and Nadeau (2012), I include an additional wrinkle to the model in that I control for human capital quality amongst immigrants using relative GDP per capita as an index of human capital quality. The findings indicate that accounting for human capital quality differences does not explain a significant portion of the difference in the wage gap between Quebec and the Rest of Canada. The majority of the difference still lies in the unexplained component of the gap, specifically the constant component of the unexplained gap. This suggests that there may still be variables omitted from the model that explains a larger portion of the wage gap difference between the two regions.

1. Introduction

There are many features about Quebec that differentiate it from the other provinces in Canada. The language and culture are two things that immediately make Quebec stand out from the rest of Canada, but the differences do not end there. Economic and policy differences also exist between Quebec and the rest of the country. Of late, factors which may or may not include these differences have compounded to manifest an immigrant-native wage gap in Quebec that is substantially larger than that in the rest of Canada. As of the 2006 census, the average immigrant-native wage gap in Quebec is an astounding 12.7%, which dwarfs the same figure in the rest of Canada, which is much smaller at 5.1%.

This problem has been broached in economic study before. For instance, Bloom, Grenier and Gunderson's (1995) findings suggest that immigrants in the second half of the 20th century have experienced longer periods of assimilation and a larger immigrant native wage gap, and Nadeau and Seckin (2010), who attribute the majority of the widening of the difference in the immigrant native wage gap between Quebec and the rest of Canada to a decrease in the citizenship premium earned by immigrants upon being admitted into Canada. This premium was all but eliminated in Quebec in the 1990's and 2000's. Grenier and Nadeau (2011) decompose immigrant samples in Montreal and Toronto by country of birth to study differences in access to work. Their findings show that immigrants in Montreal tend to come

from different countries than immigrants in Toronto, which could explain why they had more difficulty finding employment than their counterparts in Toronto.¹

This paper, however, amalgamates two methods that have been used when studying the immigrant wage gap. First, as in Nadeau and Seckin (2010), the wage gap and the Oaxaca decomposition of the wage gap in Quebec will be compared to the corresponding gap and decomposition for the rest of Canada. While Quebec differs in many aspects from the rest of Canada, it is still part of the country. Identifying which facets of the Oaxaca decomposition have the greatest discrepancies between Quebec and the rest of Canada should give an idea which issues lie at the heart of the problem.

This paper will also implement an adjustment for human capital quality in the analysis of the immigrant wage gap as in Coulombe, Grenier and Nadeau (2012). Due to its official language, Quebec attracts immigrants from a different selection of countries than does the rest of Canada (see, for example, Grenier and Nadeau, 2011). Because of different institutions, different systems of education and different levels of economic development, immigrants from different countries may have different human capital quality. However, if quality of human capital is not taken into consideration, the results of the Oaxaca decomposition would likely show lower returns to schooling and work experience for immigrants in Quebec than those in the rest of Canada which could be interpreted in a number of ways including immigrants being more discriminated against in Quebec than in the rest of Canada.

¹ It is important to note that Grenier and Nadeau (2011) compare the immigrant-Canadian born employment rate gap for the samples in Montreal and Toronto. As such, the issue they look at is not the same as that examined in this paper which involves comparing earning gaps.

This paper will follow a methodology similar to that of Coulombe, Grenier and Nadeau (2012): the natural logarithm of the weekly wages of the sample under consideration will be regressed against a set of explanatory variables including schooling, work experience and language. These variables will each be segmented into two subsets, each applying to the two halves of our sample: immigrants and natives. In a second regression, a variable will be introduced that accounts for the quality of human capital. This variable, which is simply the ratio of GDP per capita of an individual's country of birth to that of Canada, will impact the results in two ways. The direct effect will measure the effect of the quality indicator on its own, while the indirect effect will measure the effect of the quality indicator through the explanatory variables of the first regression (schooling and work experience). Following this, the wage gap between natives and immigrants will be broken down using the Oaxaca decomposition method into the explained and unexplained components as well as the gap attributable to human capital quality.

The key difference between the methodology used in this paper and that of Coulombe, Grenier and Nadeau (2012) is that regressions will be conducted for two regions: Quebec and the rest of Canada as was done in Nadeau and Seckin (2010). Once the regressions and decompositions are completed for both regions, the decompositions will be compared to determine which component or components explain the majority of the difference in wage gaps between the two regions. It is my hypothesis that a large portion of the difference between the immigrant wage gap in Quebec and that in the rest of Canada can be attributed to lower human capital quality amongst Quebec immigrants as a result of their countries of birth.

The paper is organized as follows: section 2 provides a review of pertinent literature; section 3 describes the statistical framework of the methodology used; section 4 discusses the data used; section 5 analyses the empirical results and section 6 concludes.

2. Literature review

This paper bridges the gap between two segments of the literature dealing with the immigrant wage gap in Canada. The first segment notes that key differences exist between Quebec and the rest of Canada and seeks to analyze what disparities, if any, exist between the wage gaps in these two regions as a result of these differences. The second segment aims to treat human capital quality as heterogeneous across countries and controls for such in the wage equation. The following section examines a selection of key papers in those two segments.

2.1 The Immigrant Wage Gap in Canada and Quebec

Over the latter half of the twentieth century, Canadian immigration policy has underwent several changes that have impacted who is granted admission into the country and who is not. Naturally, these policies have given rise to studies that aim to examine the economic ramifications of these policy changes. Bloom, Grenier and Gunderson (1995) examine the impact on the immigrant wage gap and on the assimilation of immigrants of two such policies: the introduction of the points system in the late 1960's and the increased emphasis immigration policy placed upon family reunification and humanitarian concerns (ie: towards refugees) in the 1970's (Bloom, Grenier and Gunderson, 1995). The results, while not necessarily suggesting causality, show that the implementation of the two policies in question

coincides with a greater immigrant-native wage gap and a longer period of assimilation. Bloom, Grenier and Gunderson (1995) also point out that the policy changes lead to a shift in the source countries of immigrants, though it was uncertain if there was any significant causality between the policy changes and the shift in source countries. Other researchers who have followed share this sentiment. Aydemir and Skuterud (2005) for instance primarily attribute the widening of the gap during this period to a change in the source countries of immigrants. Their results show that roughly half of the deterioration of the entry wages of immigrants is attributable to declining returns to foreign work experience and inferior knowledge of official languages; both factors relating to the immigrants' region of origin (Aydemir and Skuterud, 2005). Similar results were found by Frenette and Morissette (2005) and Picot and Sweetman (2005) with the latter analyzing the low-income rate to take into account unemployment and discouraged worker effects. The results of Pendakur and Pendakur (1998) also support these findings; they show that immigrants of a visible minority (in other words, from non-traditional source countries) face a wage gap that is roughly ten times that of white immigrants (Pendakur and Pendakur, 1998).

The methodology to be employed in this paper was first introduced in the same year in two papers. Blinder (1973) used the method to analyze the role of discrimination in both the male-female wage gap and the black-white wage gap in the United States, while Oaxaca (1973) uses the method just to assess male-female wage differentials in the United States.

Studies frequently compare the wage gap in the private sector versus the public sector (see Tansel, 2004 and Dustmann and van Soest, 1998), the rural population to the urban population (see Ahmed and Maitra, 2010), or compare across industries (see Gannon et al.,

2005). These approaches are particularly useful for identifying the impact of unions on the wage gap decomposition. Analyses can also be done using a single sample compared in different time frames (see Green and Worswick, 2010 and Butcher and Dinardo, 2002). There are problems with this approach, however, as the change in the wage gap may simply reflect business cycle fluctuations and have little to do with policy change or other factors.

In Ahmed and Maitra (2010), the difference in wages between male and female workers is broken down into the observed and unobserved components for both the rural and urban labour markets of Bangladesh. Though not pertaining directly to the problem of ethnic or immigrant wage discrimination, the content of this paper employs the Oaxaca decomposition method to address the problem of gender wage discrimination. Interestingly enough, the results show that the gender wage gap is more pronounced in the urban labour market. The article makes it easy for policymakers to see where the problem is the most severe.

Another strategy is to decompose and compare the wage gap for two different countries. This approach is dangerous as even neighbouring countries can have countless economic, cultural and legal differences that would impact the results. A safer method would be to partition a country and compare the decompositions between the two segments. As they are all part of one country, provinces and territories share many economic and cultural features as well as adhering to similar if not identical laws. However, if a striking difference exists between two regions, comparing the respective wage gap decompositions will shed light on the impact this difference has on immigrant assimilation. For instance, Quebec is unique from the rest of Canada in that most of its inhabitants have French as their mother tongue. As such it will attract a different pool of immigrants than any other province. Compounding the issue, Quebec

has instituted its own screening process for potential immigrants. This process places much more emphasis on French language skills than that of the rest of Canada (Nadeau and Seckin, 2010). Due to these differences, a comparison between the wage gap in Quebec and in the rest of Canada presents an opportunity for fruitful economic insight. Nadeau and Seckin (2010) use this approach to identify any discrepancies between the immigrant wage gap in the aforementioned regions using a male sample for the years 1980, 1990 and 2000. The results show that, while the wage gap widened in both regions (a fact that can be attributed mostly to a shift in immigrant source countries) the change was more significant in Quebec than in the rest of Canada. The drop in the observed component in Quebec was notably large, though this is attributable to an improvement in the skills of males native to Quebec more than anything else.

One explanation for these results lies in the emphasis that Quebec immigration places on French language skills. Understandably, the returns to speaking French are quite sizable in Quebec, though this does not help the proportion of immigrants (roughly one fifth) who do not speak French. Furthermore, this emphasis on French has led to more and more immigrants coming from French speaking countries that are notably poor and have less transferrable human capital (Nadeau and Seckin, 2010).

The results also show that Quebec had a larger unexplained proportion of the immigrant wage gap compared with the rest of Canada. Nadeau and Seckin do not provide a satisfactory explanation for this state of affairs, although they do rule out discrimination as a possible cause (Nadeau and Seckin, 2010). However, there is another possible explanation for this larger unexplained component. A notable omission is that the model does not control for human

capital quality. When human capital quality is not controlled for, the resulting decomposition will have a higher unexplained component if the immigrant sample has lower quality human capital. This is possibly the case for Quebec since many of their immigrants would come from poor French-speaking countries. Grenier and Nadeau (2011) break down the immigrant populations of Montreal and Toronto by source country and find that a large proportion of immigrants in Montreal were found to come from developing countries such as Haiti, Lebanon, Algeria and Morocco. Had the model in Nadeau and Seckin (2010) been specified to control for human capital quality, the unexplained component could have been much lower.

2.2 Controlling for Human Capital Quality

A common problem with studies that examine immigrant wage gaps is how they approach the issue of human capital differences between natives and immigrants. Working under the assumption that a year of schooling in developing countries is comparable to a year of schooling in Canada is very dangerous. Because it is in a poorer country, a school in the third world will not have the same equipment and materials and hence will not be able to offer as much to students as a school in Canada (see, for instance, Hanushek and Kimko, 2000). The same argument can be made about work experience accumulated abroad. Schaafsma and Sweetman (2001) distinguish between immigrant work experience acquired abroad and in the host country in their analysis of how age at immigration affects eventual earnings. Their findings indicate that work experience acquired in foreign countries “yield virtually no returns in the host country” (Schaafsma and Sweetman, 2001, p. 3). They also find that the returns to education decrease as the age at immigration increases (Schaafsma and Sweetman, 2001). While the paper has shown that it is unwise to assume homogeneity of human capital across

countries, it only distinguishes foreign human capital from Canadian human capital. In other words, it assumes homogeneity of human capital across all countries with the exception of Canada. For the purposes of this study, this assumption cannot be made; a method must be contrived to account for the differences in human capital quality for as many immigrant source countries as possible.

As human capital quality cannot be measured in units, a proxy must be used to roughly account for the quality of accumulated schooling and work experience. One option is to use the results of cognitive tests. For instance, Bonikowska, Green and Riddell (2008) account for human capital quality using scores from the International Adult Literacy and Skills Survey (IALSS), which measures “literacy, numeracy and problem-solving skills,” in their examination of the native-immigrant wage gap in Canada (Bonikowska, Green and Riddell, 2008, p. 8). Sweetman also examines the immigrant wage gap in Canada, but with a schooling quality index originally developed by Hanushek and Kimko (2000) that mostly measures aptitudes in math and science (Sweetman, 2004).

However, as Coulombe, Grenier and Nadeau (2012) point out, cognitive tests “are expensive to do and are only available in a few surveys and for a limited number of countries” (Coulombe, Grenier and Nadeau, 2012, p. 5). It is also mentioned that while cognitive tests act as a suitable proxy for schooling quality, as they mainly test academic proficiencies they are a poor surrogate for work experience quality. This problem is evident in the indices used in both of the aforementioned studies.

To get around these problems, Coulombe, Grenier and Nadeau (2012) use an index based around the GDP per capita of the immigrant’s country of birth as a proxy for human

capital quality (Coulombe, Grenier and Nadeau, 2012). Unlike cognitive tests, data for GDP per capita is inexpensive to obtain and readily available for almost all countries. Furthermore, there should be a strong correlation between an immigrant's work experience quality and GDP per capita of their birth nation. Indeed, it seems reasonable to assume that the higher the GDP per capita in an immigrant's country of birth, the more likely the workplace where he or she accumulated experience will have a higher capital/labour ratio and greater technology. Coulombe, Grenier and Nadeau (2012) relate this to *learning-by-doing*, the phenomena initially put forward in Arrow (1962).

In addition, Coulombe, Grenier and Nadeau (2012) chose to specify their surrogate variables even further by using GDP per capita only at specific points in the immigrant's life. The proxy for schooling quality uses the GDP per capita of the immigrant's country of origin at the time he or she receives their highest degree or diploma, while the proxy for work experience quality uses the GDP per capita of the country of origin at the time of immigration to Canada (Coulombe, Grenier and Nadeau, 2012). While this may not have dramatic ramifications, there are several examples of countries that experience exponential growth rates over a very short period of time (post-war Japan and Korea in the latter half of the twentieth century come to mind). For individuals from these countries who immigrate decades after obtaining their highest academic certificate, the difference in GDP could be quite substantial.

Coulombe, Grenier and Nadeau (2012) find that accounting for human capital quality dramatically affects the results of the Blinder-Oaxaca decomposition. If quality of schooling and work experience of immigrants were the same as for Canadian natives, the observed component of the wage gap would be weighted in favour of immigrants; immigrant males

would earn roughly 15 percent more than natives and female immigrants would earn roughly 12 percent more than natives (Coulombe, Grenier and Nadeau, 2012). Of course, since immigrants earn less than natives in actuality, the decomposition compensates by having a severely inflated unobserved component. Once human capital quality is accounted for, however, the decomposition changes so that the unobserved component is much smaller (roughly 64 percent smaller) and the observed component has immigrant males earning 4 percent less than natives and immigrant females earning 3 percent less than natives (Coulombe, Grenier and Nadeau, 2012).

As this paper will center around a comparison of the Oaxaca decompositions of the immigrant wage gap in Quebec with that of the rest of Canada, the implications of using a proxy to control for human capital quality are paramount. As Quebec is different from the rest of Canada in both language and culture, it will attract immigrants who may differ from those who choose to immigrate to the rest of Canada. Apart from France and Belgium, most French-speaking countries of the world, such as Haiti and Gabon, are very poor and hence immigrants from these countries may have low quality human capital. If no adjustment were made, the immigrant wage gap decomposition for Quebec could have a much larger unexplained component than that of the rest of Canada which may lead one to believe there are faults in Quebec labour policies or that Quebec employers give an unfair advantage to native employees. However it is possible that, once adjusted for human capital quality, any discrepancies between the wage gap in Quebec and the rest of Canada might be found in the observed human capital quality component and not the unobserved component of the wage gap.

3. Statistical Framework

The model used in this paper is based in large on the work of Coulombe, Grenier and Nadeau (2012), the main commonality being that human capital quality is accounted for and accepted as heterogeneous across the countries of birth of immigrants. The key difference between the two papers is that the results of this paper draw heavily upon a comparison between the wage gaps of Quebec and the rest of Canada. This will necessitate decomposing two wage gaps, one for each region, which is not done in the above mentioned paper.

In the absence of any difference in human capital quality, modeling the mean log wages of natives and immigrants is quite simple. Using the subscript N for natives and I for immigrants, the mean log wages of Canadian-born workers and immigrant workers respectively are:

$$w_N = \alpha_N S_N + \beta_{N1} X_N + \beta_{N2} X_N^2 + \gamma_N \phi_N \quad (1)$$

$$w_I = \alpha_I S_I + \beta_{I1} X_I + \beta_{I2} X_I^2 + \gamma_I \phi_I + z\gamma \quad (2)$$

where S denotes the number of years of schooling, X denotes the number of years of work experience, γ represents a vector of other control variables (language skill, marital status etc. including a constant term) and z represents the country of origin of immigrants. All of these variables are measured at their means. The symbols α , β , ϕ and γ are all OLS coefficient estimates.

However, as a proxy for human capital quality is introduced, the expression for the log wages of immigrants becomes more complex than equation (2). The proxy that will be used is the variable introduced by Coulombe, Grenier and Nadeau (2012), namely a ratio of GDP per capita between an immigrant's country of birth and that of Canada. This variable is used in lieu

of other candidates mainly because it is readily available for most countries of the world and, of course, because of its logical correlation to human capital quality outlined in the literature review.

$$q_t = \ln\left(\frac{GDP_{c_{ft}}}{GDP_{c_{ct}}}\right) \quad (3)$$

Where q_t is such that $q_t > 0$ implies that the human capital in the immigrant's country of birth is of a higher quality than that of Canada, $q_t < 0$ if the human capital is of a lower quality than that of Canada and $q_t = 0$ if the human capital is of comparable quality to that of Canada. $GDP_{c_{ft}}$ and $GDP_{c_{ct}}$ are the GDP per capita in the immigrant's country of birth and Canada respectively and t is an index of time. Furthermore, we will introduce an indicator variable, $fdip$, which takes the value 1 if the immigrant's highest degree or diploma was obtained outside Canada and zero otherwise. A third variable to be newly introduced, X_f , denotes work experience accrued outside of Canada. These latter two variables are introduced to further distinguish the heterogeneity between human capital acquired within Canada and outside Canada and their respective impacts on the wages of immigrants. For instance, an immigrant who has five years experience in the Canadian labour market and five years experience in a foreign labour market will be more likely to have a higher wage than an immigrant with two years experience in the Canadian labour market and eight years in a foreign labour market; yet without the variable X_f , these two immigrants are treated as the same. Finally, the variable s_f is introduced to represent schooling accrued by immigrants in their countries of birth. With these new variables introduced, the mean log wages of immigrants can be expressed as:

$$w_I = \alpha_I S_I + \theta_1 q_I + \theta_2 S_{If} + \theta_3 q_I S_I + \theta_4 S_{If} dip_I + \theta_5 S_{If} dip_I q_I + \beta_{1I} X_I + \beta_{2I} X_I^2 + (\theta_6 + \theta_7 X_I + \theta_8 X_{If}) X_{If} + (\theta_9 + \theta_{10} X_I + [\theta_{11} + \theta_{12} q_I] X_{If}) X_{If} q_I + y_I \phi_I + z\gamma \quad (4)$$

Taking the difference of equation (1) from equation (4) gives us the immigrant-native wage gap below:

$$(w_I - w_N) = \{\alpha_N(S_I - S_N) + \beta_{N1}(X_I - X_N) + \beta_{N2}(X_I^2 - X_N^2) + \phi_N(y_I - y_N)\} + \{S_I(\alpha_I - \alpha_N) + X_I(\beta_{1I} - \beta_{1N}) + X_I^2(\beta_{1I} - \beta_{1N}) + y_I(\phi_I - \phi_N)\} + \theta_1 q_I + S_{If}\{\theta_2 + \theta_3 q_I + \theta_4 dip_I + \theta_5 dip_I q_I\} + \{X_{If}(\theta_6 + \theta_9 q_I) + X_I X_{If}(\theta_7 + \theta_{10} q_I) + X_I^2 X_{If}(\theta_8 + \theta_{11} q_I + \theta_{12} q_I^2)\} + z\gamma \quad (5)$$

The first bracketed term of equation (5) is the explained component of the wage gap. This term measure the proportion of the gap that is due to differences in observable attributes (such as years of schooling and work experience) between immigrants and natives. The second term is the unexplained component of the wage gap. The third term is the direct impact of the GDP per capita of the immigrant's country of birth. The fourth term is the component which reflects the impact of the differences in the quality of schooling between immigrants and natives while the fifth term reflects the impact of the differences in the quality of work experience between immigrants and natives. The final term reflects the impact of immigrant country of birth fixed effects.

The components of interest in this paper are the fourth and fifth components: the impact of the differences of quality of education and work experience between immigrants and natives. Regressions will be run for both Quebec and the rest of Canada and the respective aforementioned components will be compared to see how the differences in human capital

quality effects varies between Quebec and the rest of Canada. Specifically, in the equations below, equation (6) will be compared with equation (7) and equation (8) will be compared with equation (9). The superscript Q indicates that only the data points from Quebec are being applied to the variable in question. Similarly, the superscript R indicates that only the data points from the rest of Canada are being applied to the variable in question.

Compare:

$$s^Q_{If}\{\theta^Q_2 + \theta^Q_3q^Q_I + \theta^Q_4fdip^Q_I + \theta^Q_5fdip^Q_Iq^Q_I\} \quad (6)$$

With:

$$s^R_{If}\{\theta^R_2 + \theta^R_3q^R_I + \theta^R_4fdip^R_I + \theta^R_5fdip^R_Iq^R_I\} \quad (7)$$

And:

$$\{(\theta^Q_6 + \theta^Q_7x^Q_I + \theta^Q_8x^Q_{If})x^Q_{If} + (\theta^Q_9 + \theta^Q_{10}x^Q_I + [\theta^Q_{11} + \theta^Q_{12}q^Q_I]x^Q_{If})x^Q_{If}q^Q_I\} \quad (8)$$

With:

$$\{(\theta^R_6 + \theta^R_7x^R_I + \theta^R_8x^R_{If})x^R_{If} + (\theta^R_9 + \theta^R_{10}x^R_I + [\theta^R_{11} + \theta^R_{12}q^R_I]x^R_{If})x^R_{If}q^R_I\} \quad (9)$$

4. Data and summary statistics

The data used in the following regressions is taken from the 2006 Canadian census Microdata masterfile and is basically identical to that used in Coulombe, Grenier and Nadeau. The sample is comprised solely of working age (ie: aged 18-64) males. The sample only contains workers who worked full-time and full-year in the 2005 calendar year. A worker is under full-time status if he works 30 hours or more per week. In similar fashion, a worker has worked a full year if he has worked 49 weeks or more. Also, only Canadian born workers whose highest degree, diploma or certification has been achieved in Canada will be included in the sample of Canadian born individuals.

For immigrants, the variables 'years of schooling in birth country' and 'years of schooling in Canada' are constructed from the immigrant's year of birth, year arrived in Canada, total years of schooling and whether their highest diploma, degree or certification was obtained in Canada or their country of birth.

Similarly, the variable 'years of work experience in birth country' and 'years of work experience in Canada' are also derived using year of birth, year landed in Canada and also total potential work experience. Potential work experience is defined as $Age - years\ of\ schooling - 6$. Furthermore, it is assumed that all potential work experience for Canadian born individuals is accumulated in Canada. The 2006 census does not report the variable 'years of schooling'. As such, this variable is constructed using information that is provided; namely the nature of the highest certificate, degree or diploma obtained as described in Coulombe, Grenier and Nadeau

(2012). The relative GDP variable is constructed as the ratio of a ten-year moving average of an immigrant's country of origin real GDP per capita and that of Canada.²

Table 1: Key Common Average Characteristics of Immigrant and Canadian Born Males (2006)^A

	Quebec		Rest of Canada	
	Canadian Born	Immigrants	Canadian Born	Immigrants
<i>% of Population</i>	22.1	2.3	59.0	16.6
<i>Weekly earnings (\$)</i>	912.1 (1.70)	860.7 (5.89)	1087.9 (1.91)	1032.2 (3.87)
<i>Ln weekly earnings</i>	6.647 (0.001)	6.538 (0.004)	6.769 (0.001)	6.714 (0.001)
<i>Total years of schooling</i>	13.5 (0.005)	14.0 (0.019)	13.5 (0.003)	14.0 (0.007)
<i>In Canada</i>	13.5 (0.005)	3.0 (0.032)	13.5 (0.003)	3.3 (0.012)
<i>In birth country</i>	13.5 (0.005)	11.0 (0.034)	13.5 (0.003)	10.7 (0.013)
<i>Total potential experience (years)</i>	22.3 (0.022)	23.7 (0.068)	21.8 (0.014)	24.2 (0.025)
<i>In Canada</i>	22.3 (0.022)	17.0 (0.049)	21.8 (0.014)	17.4 (0.017)
<i>In birth country</i>	22.3 (0.022)	6.7(0.047)	21.8 (0.014)	6.8 (0.018)
<i>Real GDP per Capita ratio at time of immigration (q_i)</i>	1.0	0.41(0.002)	1.0	0.43 (0.001)
<i>Sample size</i>	309,329	32,961	828,045	232,449

^A The values in parentheses are the corresponding standard errors.

Table 1 summarizes key statistics for males in each of the four subsamples used in the analysis: Canadian born males in Quebec, immigrant males in Quebec, Canadian born males in the rest of Canada and immigrant males in the rest of Canada. In each region, it is worth noting that immigrants have a higher endowment on average of schooling and years of potential work experience than do their Canadian born counterparts. However, as has been noted in the introduction, immigrant males earn approximately 5.1% and 12.7% less than natives in the rest

² The data on real GDP per capita comes from Heston, Summers and Aten (2009). For more information on the data used, see appendix A of Coulombe, Grenier and Nadeau (2012)

of Canada and Quebec respectively. I posit that this can be explained by lower human capital quality for immigrants. It is to be determined in the empirical results section how much of the wage gap can be attributed to the difference in human capital quality between immigrants and natives and also whether this proportion of the gap is different between Quebec and the rest of Canada.

Further down the table, it is shown that the GDP per capita of the immigrants' countries of birth are on average 41% that of Canada's GDP per capita for Quebec immigrants and 43% that of Canada's GDP per capita for immigrants in the rest of Canada. This statistic is surprising and provides evidence that undermines the hypothesis presented in the introduction before any regression is performed. In order for my hypothesis to hold, I would expect to see the human capital quality index be much lower on average in Quebec than in the rest of Canada rather than the mere 2% difference that the sample shows. This, coupled with the fact that the schooling and experience terms themselves are very similar amongst immigrants in the two regions suggests that the proportion of the gap attributed to differences in human capital quality in Quebec may be very similar to that in the rest of Canada.

It is unclear why the human capital indices are so similar in the two regions. As mentioned in the introduction and literature review, Grenier and Nadeau (2011) break down Montreal's immigrant population by country of birth and a substantial proportion of the immigrants are from developing countries. This includes 7.1% of the immigrant population originating in Haiti, 5.6% in Lebanon and over 10% from countries in Northern Africa. For whatever reason,

however, this does not factor greatly into the average index of human capital quality as the values are almost identical in the two regions.³

5. Empirical Results

The results of the regressions are presented in the tables below. Table 2 summarizes the returns to schooling and work experience for the four sub-samples in question under the base case model. Table 3 presents the same returns with adjustments made to compensate for human capital quality differences. Tables A1 and A2 (presented in the appendix) summarize the control variable coefficients in the executed regressions while Table 4 and Table 5 present the results of the Blinder-Oaxaca decomposition of the immigrant-native wage gaps in Quebec and the rest of Canada under the base case and quality adjusted model.

Table 2: Base Case Model: Returns to years of schooling and Work Experience^B

Variables	Quebec			Rest of Canada		
	<i>Canadian Born</i> (1)	<i>Immigrants</i> (2)	<i>(2) - (1)</i>	<i>Canadian Born</i> (3)	<i>Immigrants</i> (4)	<i>(4) - (3)</i>
$\alpha_1(S)$	0.077 (143.5)	0.081 (51.3)	0.0044 (2.64)	0.081 (215.5)	0.064 (96.4)	-0.0166 (21.8)
$\beta_1(X)$	0.044 (92.4)	0.029 (16.7)	-0.015 (8.33)	0.051 (158.5)	0.036 (50.2)	-0.0157 (20.0)
$\beta_2(X^2)$	-0.001 (65.)	-0.0003 (9.9)	0.0004 (11.8)	-0.001 (113.1)	-0.001 (35.2)	0.0003 (10.1)
<i>N</i>	309,329	32,961		828,045	232,449	

^B The values in parentheses are the t-ratios in absolute value for the corresponding estimates

³ It must also be pointed out that a large proportion of immigrants who settle in the rest of Canada also come from developing countries. For example, Grenier and Nadeau (2011) find that the most common countries of birth of Toronto immigrants are India and China.

5.1 Base Case Model

The base case regression model makes the assumption of human capital homogeneity across countries; in other words, it assumes that a year of schooling and a year of work experience will yield the same returns in the Canadian labour market regardless of where the human capital has been accrued. This corresponds to using equation (4) with the added restriction that $\theta_1 = \theta_2 = \dots = \theta_{12} = 0$. With such a restriction in place, if the maintained assumption in this paper is correct, we would expect to see the returns to observed schooling and work experience for immigrants in the job market to be much lower than that for Canadian born, particularly if the schooling and/or experience is obtained in a developing country. Table 2 shows that the regression results are mostly in line with intuition. The returns to a year of schooling and a year of work experience are 1.7% and 1.6% higher respectively for Canadian born males in the rest of Canada than such for immigrant males in the rest of Canada. Similarly, the return to a year of work experience for Canadian born males in Quebec is 1.5% higher than that for immigrant males in Quebec. The returns to schooling in Quebec, however, are higher for immigrants than for Canadian born: an extra year of schooling for immigrants yields a wage that is 8.1% higher, while for a Canadian born male, the return is only 7.7%. The reason for this result is uncertain. It may be that Quebec employers have different hiring policies than those from the rest of Canada. For instance, competencies in French may hold more sway than the quality of human capital. However, if that were the case, we would expect to see a larger discrepancy in the language coefficients in Table A1. However, the returns to the three language categories (French only, French and English, and neither official language) are quite similar for immigrants in the quality adjusted model and natives in the base case. The only real difference is that

immigrants receive higher returns to speaking both official languages than natives and receive a smaller wage deduction than do natives for only speaking French. It may also be that there is a demand for highly specialized professionals who are fluent in French. Immigrants in these professions might be paid a premium to relocate to Quebec.

In terms of the Oaxaca decomposition (see table 4), the explained component of the wage gap is very similar for Quebec and the rest of Canada. The explained component is a mere 2.6% larger in magnitude in Quebec than in the rest of Canada. This figure is smaller than the 5.4% found in Nadeau and Seckin (2010) for the 2000 census year⁴ Even though the explained gap is small at 2.6%, it is important to note that the difference between the explained components in the two regions is statistically significant with a t value of 8.24, due to the large t values of the explained components in the two regions. This difference in the explained components primarily comes from higher endowments of experience amongst immigrants and the 'others' component, which is 3% higher in the rest of Canada than in Quebec (this figure is also statistically significant with a t value of 32.9). Interestingly enough, the language component of the gap is higher in Quebec than in the rest of Canada with over 3% difference between the two regions in Quebec's favour (significant with a t-value of 13.3). The figure for the language component in the rest of Canada has a negative magnitude, which implies that immigrants experience negative returns for their understanding, or lack thereof, of Canada's official languages. Conversely, the fact that the same figure in Quebec is positive and of much larger magnitude than in the rest of Canada speaks of how strongly fluency in French plays a role in Quebec's labour market and the policies that affect the decisions made in the market.

⁴ While Nadeau and Seckin (2010) do not account for human capital quality, this would only affect the unexplained component, not the explained component.

The language component figures in Nadeau and Seckin (2010) were negative in both regions and much closer in magnitude (-0.055 in the rest of Canada versus -0.074 in Quebec). The experience component of the gap, however, is higher in the rest of Canada than in Quebec by 2.2% (significant with a t-value of 21.7). The 'others' component is also larger in the rest of Canada, this time by 3%.

The unexplained gap features components with a great deal of separation between immigrants and natives for both regions. In Quebec, the majority of the 24.2% unexplained gap between natives and immigrants comes from the work experience component (11.3% lower for immigrants) and the 'others' component (27.7% lower for immigrants). The latter result, however, may end up being attributable to an omitted variable and could be lower in the quality adjusted model. Once again, though, we see positive values for the language and schooling coefficients in Quebec. As these components yield higher returns for immigrants, it provides evidence against discrimination in these areas.

Meanwhile, the lion's share of the 19.2% unexplained between natives and immigrants in the rest of Canada is found in the schooling component (23.3% lower for immigrants) and the work experience component (16.4% lower for immigrants). As these are both human capital variables, it is entirely possible that they both are drastically reduced once the human capital quality index is introduced in the quality adjusted model.

The unexplained gap is also the sub-section that features the most separation between the immigrant-native wage gap in Quebec and the rest of Canada. Of note, the unexplained schooling component shows a difference of 29.5% (significant with a t-value of 11.4) between Quebec and the rest of Canada (which echoes the aforementioned regression results) and the

constant term of the unexplained gap shows a difference of 46.5% (significant with a t-value of 10.0) between Quebec and the rest of Canada.

5.2 Quality Adjusted Model

The second model under investigation, the quality adjusted model, drops the assumption of human capital homogeneity across countries. The variable q , the ratio of the GDP per capita of an immigrant's country of origin to Canada's GDP per capita, is introduced to act as a proxy for human capital quality. The framework of this model allows for both the direct effect of q and also the indirect effect of q through its impact on the returns to years of schooling and work experience. In other words, this model corresponds to using equation (4) in the statistical framework without restrictions.

The coefficient estimates for the quality adjusted model are presented in Table 3 below. The estimates for the direct effect of the quality of human capital are weakly negative for both Quebec and the rest of Canada. These coefficients are also statistically insignificant. These results echo those found in Coulombe, Grenier and Nadeau (2012) and suggest that the country of origin GDP effect comes mostly from the human capital differences and, in similar fashion, raise doubt about the possibility of an immigrant self-selection effect as modeled by Borjas (1987).⁵

⁵ Although statistically insignificant in my case, Borjas theorizes that a negative coefficient for q suggests that immigrants from poorer countries may be more motivated or have higher unobservable skills than immigrants from richer countries.

Table 3: Quality Adjusted Model

Variables	Quebec			Rest of Canada		
	Canadian Born (1)	Immigrants (2)	(2) - (1)	Canadian Born (3)	Immigrants (4)	(4) - (3)
$\alpha_1 (S)$	0.077 (143.5)	0.078 (39.6)	0.001 (0.49)	0.081 (215.5)	0.068 (90.4)	-0.0125 (14.9)
$\theta_1 (q_I)$		-0.016 (1.)			-0.002 (0.4)	
$\theta_2 (s_I)$		-0.004 (2.3)			-0.001 (1.01)	
$\theta_3 (s_I q_S)$		0.001 (1.6)			0.003 (8.1)	
$\theta_4 (s_I f_{dip})$		0.003 (2.1)			0.003 (4.3)	
$\theta_5 (s_I f_{dip} q_S)$		0.006 (6.7)			0.004 (13.2)	
$\beta_1 (X)$	0.044 (92.4)	0.04 (20.7)	-0.0044 (2.21)	0.051 (158.5)	0.046 (58.9)	-0.0051(6.04)
$\beta_2 (X^2)^*$	-0.1 (65.)	-0.1 (13.2)	0.01 (1.29)	-0.1 (113.1)	-0.1 (43)	0 (0)
$\theta_6 (x_I)$		-0.009 (2.1)			-0.015 (8.2)	
$\theta_7 (X x_I)^*$		0.03 (2.3)			0.1 (8.6)	
$\theta_8 (x_I^2)^*$		-0.02 (0.9)			-0.1 (6.5)	
$\theta_9 (x_I q_S)^*$		0.8 (3.5)			0.5 (5.7)	
$\theta_{10} (X x_I q_S)^*$		-0.01 (1.4)			-0.01 (3.8)	
$\theta_{11} (x_I^2 q_S)^*$		0.01 (1.3)			0.01 (2.7)	
$\theta_{12} (x_I^2 q_S^2)^*$		0.007 (3.2)			0.004 (4.3)	
<i>N</i>	309,329	32,961		828,045	232,449	

* These variables have been multiplied by 100 to simplify the table

Turning to the indirect effect of the human capital quality index, the results show that a male immigrant who acquired schooling in a country with a GDP per capita similar to that of

Canada (ie: $q=0$) is expected to earn a rate of return per year of schooling that is 1.6% higher than an immigrant who acquired schooling in a country with one tenth the GDP per capita of Canada.⁶ This figure is identical for Quebec and the rest of Canada. It is interesting to note that, while the above mentioned difference may be identical in Quebec and the rest of Canada, the components comprising the difference are not. The direct impact of foreign schooling is 0.3% higher in the rest of Canada compared with Quebec. Similarly, the quality adjusted foreign schooling effect is 0.2% higher in the rest of Canada.

For the returns to work experience, an immigrant in Quebec from a country with a GDP per capita similar to Canada's is expected to have a marginal rate of return 0.15% higher evaluated at the mean than an immigrant from a country with a GDP per capita one tenth that of Canada. The corresponding figure is 0.21% in the rest of Canada.⁷

The results of the wage gap decomposition for the quality adjusted model for both regions are presented in Table 4.⁸ For both Quebec and the rest of Canada, the inclusion of a proxy for human capital quality has the expected effect. Over half of the unexplained gap from the base case model is now attributable to immigrant specific effects in each region. As such, the magnitudes of the unexplained schooling, work experience and language components have dropped dramatically. This suggests that one of the key reasons for the lower returns to

⁶ This figure was calculated by taking the difference of the derivative of equation (4) with respect to s_f evaluated at the coefficients of the quality adjusted model, $q=0$ and $fdip=1$ with that under the same stipulations but with $q=\ln(0.1)$

⁷ This figure was obtained by evaluating the difference between the value of an additional year of work experience when $q=0$ and when $q=\ln(0.1)$. The value of an additional year of work experience is taken as the difference between equation (4) using the coefficients from the quality adjusted model and the native mean value of work experience for all experience terms and that using the native mean value of work experience plus 1 for all experience terms holding all other values constant.

⁸ To address the problem of identifying the separate contributions of individual dummy variables to the wage gap decomposition (see Oaxaca and Ransom, 1999) I follow the methodology proposed in Gardeazabal and Ugidos (2004) and constrain the sum of the estimated coefficients of each set of dummy variables in performing the decomposition.

education and work experience for immigrant males, as shown in Table 2 and Table 3, is lower human capital quality. This is true in both Quebec and the rest of Canada, and is consistent with what has been found by Coulombe, Grenier and Nadeau (2012) for Canada in its entirety.

The more surprising result, however, comes when comparing the magnitude of the immigrant specific effects in each of the two regions. According to the hypothesis stated in the introduction, it is thought that the key reason why the wage gap is larger in Quebec than in the rest of Canada is that the human capital quality is significantly lower in Quebec due largely in part to the source countries of Quebec immigrants. In order for the hypothesis to be confirmed, the immigrant specific proportion of the wage gap (in particular, the human capital quality component) would need to be much larger in Quebec than in the rest of Canada. This, however, is not the case. The size of the wage gap attributable to immigrant specific effects is only 0.7% larger in Quebec than in the rest of Canada. Moreover, this figure is not statistically significant with a t-value of only 0.26. Furthermore, the immigrant specific effect attributable to human capital quality is actually larger in the rest of Canada than in Quebec (-0.151 compared with -0.144).

As the immigrant specific proportion of the Quebec wage gap is so similar to that of the rest of Canada, the majority of the 7.6% difference in the wage gap between the two regions is still found in the unexplained proportion of the gap. Furthermore, the first three sub-categories of the unexplained gap are larger in the rest of Canada than in Quebec: the unexplained schooling gap is -17.5% in the rest of Canada versus 2% in Quebec, the unexplained experience gaps are -8.3% and -2.7% respectively and the language gaps are 1.5% and -1.2% respectively.

Table 4: Decomposition of Immigrant Wage Gaps

	Base Case				Quality Adjusted Model			
	Quebec		Rest of Canada		Quebec		Rest of Canada	
	Wage Gap	t	Wage Gap	t	Wage Gap	t	Wage Gap	t
Observed gap	-0.127	31.3	-0.051	31.1	-0.127	31.3	-0.051	31.1
Explained gap	0.115	41.2	0.141	96.0	0.115	41.2	0.141	96.0
Schooling	0.055	36.9	0.060	96.2	0.055	36.9	0.060	96.2
Work experience	0.015	16.7	0.037	79.0	0.015	16.7	0.037	79.0
Language	0.027	12.7	-0.005	4.48	0.026	12.7	-0.005	4.48
Others	0.019	26.2	0.049	88.9	0.019	26.2	0.049	88.9
Unexplained gap	-0.242	44.7	-0.192	80.2	-0.109	4.25	-0.066	7.23
Schooling	0.062	2.63	-0.233	21.8	0.020	0.68	-0.175	14.81
Work experience	-0.113	5.65	-0.164	19.5	-0.027	1.34	-0.083	9.39
Language	0.086	3.63	0.037	1.82	0.015	0.63	-0.012	0.64
Others	-0.277	7.10	0.168	6.65	-0.116	2.47	0.205	8.07
Immigrant specific effects					-0.133	5.30	-0.126	14.4

Country of birth fixed effect								0.011	1.38	0.024	8.73
<i>Human-capital quality (total)</i>								-0.144	6.12	-0.151	19.1
Country of birth's GDP direct effect								0.021	1.01	0.003	0.41
Schooling quality (total)								-0.091	6.82	-0.076	15.4
Years of foreign schooling								-0.042	2.26	-0.007	1.01
Foreign diploma fixed effect								0.021	2.12	0.018	4.32
Country of birth's GDP education effect								-0.070	6.00	-0.087	18.9
Work experience quality (total)								-0.075	9.96	-0.077	28.8
Years of foreign work experience								-0.019	1.62	-0.049	11.1
Country of birth's GDP work experience effect								-0.055	5.44	-0.028	7.28

Table 5: 'Others' Component of the Unexplained Wage Gap

	Base Case				Quality Adjusted Model			
	Quebec		Rest of Canada		Quebec		Rest of Canada	
	Wage Gap	t	Wage Gap	t	Wage Gap	t	Wage Gap	t
Unexplained gap: Others Component	-0.277	7.10	0.168	6.65	-0.116	2.47	0.205	8.07
Constant	-0.184	4.55	0.281	11.0	-0.109	2.27	0.228	8.92
Region			-0.011	3.37			0.004	1.18
Urban	-0.074	6.00	-0.070	18.3	0.005	0.41	-0.013	3.32
Marital Status	-0.019	6.12	-0.031	20.5	-0.012	4.11	-0.014	9.44
Other	-0.092	7.23	-0.112	22.5	-0.007	0.56	-0.023	4.52

The constant/others component of the unexplained wage gap has been further decomposed into additional sub-categories in Table 5. This table shows that of the constant, region, marital status, urban and other sub-categories, the only one with significant deviation between Quebec and the rest of Canada is the constant category.

These results may indicate that our model has been misspecified and a key variable is omitted. This variable or group of variables would need to work in favour of immigrants in the rest of Canada, but work against immigrants in Quebec. It is unlikely that discrimination plays any role in the size of Quebec's unexplained wage gap. If discrimination was a factor, then it is unlikely that we would see the unexplained education and experience components of the immigrant-native wage gap be non-significantly different from zero.

As mentioned in the literature review, Quebec has control over its own immigration policies which may have different priorities than those of the rest of Canada. For instance, French language skills may supersede other factors. Also, from an immigrant point of view, there may be certain industries without great employment opportunity in Quebec. An immigrant may choose Quebec because French is his mother tongue, yet may not be able to find work in his or her field simply because the jobs are not there. It may also be that, due to the nature of the countries that some of the immigrants from Quebec are arriving from, securing a job prior to immigration may not have been of paramount importance, particularly if their country of birth was suffering from war or similar problems.

6. Conclusion

This paper compared the immigrant native wage gap in Quebec with that in the rest of Canada using 2006 census data. The key contributions to the literature is that the paper simultaneously adjusts for human capital quality using the ratio of GDP per capita of an immigrants country of birth to that of Canada, and also provides a comparison between the wage gap in Quebec and in the rest of Canada.

The wage gap in each region was decomposed using the Blinder-Oaxaca decomposition method, first without accounting for differences in human capital quality differences and then allowing for both the direct and indirect effects of the human capital quality index. In the base case model, the unexplained component was the largest contributor to the overall wage gap in both regions. The unexplained component was also the segment of the wage gap with the largest deviation between regions: the unexplained component in Quebec was 24.2% versus 19.2% in the rest of Canada, a difference of 5%.

However, accounting for human capital quality did little to reduce this value. In the second decomposition, the values for the unexplained component were 10.9% in Quebec and 6.6% in the rest of Canada. So while the magnitudes of this component were reduced by the inclusion of human capital quality compensation, the components were reduced by almost the same magnitude in each region. In the end, the immigrant specific proportion of the wage gap only accounted for 0.7% of the difference in the wage gaps between Quebec and the rest of Canada. Furthermore, the majority of the difference in the unexplained component between regions was located in the constant component (33.7% difference between Quebec and the

rest of Canada). This suggests that the variable or variables that explain the majority of the wage gap difference between the two regions were omitted from the model and are currently unknown.

This result, while not supportive of the hypothesis set out in the introduction, was not overly surprising considering the results found in Table 1 wherein the mean value for the human capital quality index was shown to be virtually identical in Quebec and the rest of Canada (0.41 in Quebec versus 0.43 in the rest of Canada). This means that the human capital quality of immigrants (as measured by the ratio of GDP per capita of an immigrant's country of birth to that of Canada) is not significantly lower in Quebec; this was thought to be the case because Quebec attracts immigrants from a different sample of countries from the rest of Canada, including many developing countries.

As the hypothesis is not supported by the results, more study is needed in this area to determine the cause or causes of the larger immigrant native wage gap in Quebec when compared with the rest of Canada.

APPENDIX

TABLE A1 Regression Coefficients—Control Variables (Quebec)

Variables	Native Males		Immigrant Males			
	Base Case		Base Case		Quality Adjusted	
	Coeff.	t	Coeff.	t	Coeff.	t
Constant term	5.078	339.	4.97	121.6	5.080	99.
Urban	0.049	15.4	-0.108	4.2	0.060	2.3
Married	0.182	62.5	0.110	9.8	0.135	12.4
<i>Official Language</i>						
French only	-0.103	8.2	-0.312	1.9	-0.074	3.9
English & French	0.001	0.1	0.161	11.7	0.042	2.5
None	-0.200	2.3	-0.302	6.7	-0.203	4.7
<i>Country of birth*</i>						
Central America					-0.189	4.2
Haiti					-0.179	3.6
Jamaica					-0.205	3.3
Trinidad					-0.267	4.3
Other Caribbean					-0.212	4.2
Guyana					-0.024	0.4
Other S. America					-0.157	3.7
France					-0.048	1.3
Germany					0.041	0.7
Other W. Europe					-0.019	0.4
Romania					-0.050	1.1
Poland					-0.016	0.3

Ukraine					-0.172	1.7
Russia					-0.205	3.3
Hungary					-0.233	2.3
Other E. Europe					-0.200	3.7
U.K.					0.276	6.2
Other N. Europe					0.249	2.4
Greece					-0.274	5.4
Italy					-0.058	1.5
Portugal					-0.017	0.4
Other S. Europe					-0.084	1.7
West Africa					-0.085	1.4
East Africa					-0.055	1.0
Algeria					-0.144	3.0
Egypt					-0.025	0.4
Morocco					-0.035	0.7
Other N. Africa					-0.171	3.1
Southern Africa					0.192	1.8
Lebanon					-0.142	3.1
Afghanistan					-0.167	1.7
Iran					-0.205	2.8
Iraq					-0.103	0.5
Other W.C. Asia					-0.096	1.9
China					-0.117	2.0
Hong Kong					-0.249	4.3
South Korea					-0.560	3.3
Taiwan					-0.128	1.0
Other E. Asia					-0.060	0.9

Philippines					-0.252	5.1
Vietnam					-0.109	1.9
Other S.E. Asia					-0.060	1.0
India					-0.025	0.4
Sri Lanka					-0.173	2.9
Pakistan					-0.168	2.6
Bangladesh					-0.218	3.1
Others					-0.057	0.6

*U.S. is reference

TABLE A2 Regression Coefficients—Control Variables (Rest of Canada)

Variables	Native Males		Immigrant Males			
	Base Case		Base Case		Quality Adjusted	
	Coeff.	t	Coeff.	t	Coeff.	t
Constant term	5.062	828.3	5.507	381.1	5.373	296.4
<i>Province</i>						
Atlantic	-0.256	88.4	-0.138	9.1	-0.214	14.4
Prairies	-0.164	56.8	-0.202	24.3	-0.199	25.3
Alberta	0.078	28.4	0.037	6.2	0.024	4.2
B.C.	-0.041	15.9	-0.077	15.7	-0.097	20.1
Urban	0.022	9.8	-0.135	16.4	-0.007	0.9
Married	0.226	110.2	0.123	26.8	0.179	39.0
<i>Official Language</i>						
French only	-0.055	4.3	-0.124	2.	-0.071	1.3
English & French	0.019	7.	0.113	14.3	0.027	3.4
None	-0.199	3.7	-0.363	27.	-0.135	10.2

<i>Country of birth*</i>						
Central America					-0.094	5.8
Haiti					-0.147	3.7
Jamaica					-0.070	4.4
Trinidad					-0.093	5.4
Other Caribbean					-0.124	6.7
Guyana					-0.019	1.1
Other S. America					-0.046	2.9
France					0.048	1.6
Germany					0.005	0.3
Other W. Europe					0.018	1.1
Romania					0.093	5.0
Poland					-0.006	0.4
Ukraine					-0.090	3.7
Russia					-0.074	3.3
Hungary					-0.027	1.0
Other E. Europe					-0.046	2.2
U.K.					0.080	7.2
Other N. Europe					0.068	3.3
Greece					-0.130	5.3
Italy					0.050	3.6
Portugal					0.069	4.7
Other S. Europe					0.059	3.4
West Africa					0.031	1.2
East Africa					0.001	0.1
Algeria					-0.128	1.8
Egypt					0.103	3.3

Morocco					0.025	0.4
Other N. Africa					-0.023	0.6
Southern Africa					0.289	11.7
Lebanon					-0.087	3.1
Afghanistan					-0.274	7.8
Iran					-0.121	5.5
Iraq					-0.089	2.8
Other W.C. Asia					0.035	1.6
China					-0.020	1.1
Hong Kong					-0.108	8.2
South Korea					-0.219	8.8
Taiwan					-0.146	5.2
Other E. Asia					-0.067	2.0
Philippines					-0.124	8.1
Vietnam					-0.008	0.4
Other S.E. Asia					0.008	0.4
India					0.051	2.9
Sri Lanka					-0.085	4.7
Pakistan					-0.078	3.7
Bangladesh					-0.265	8.5
Others					-0.011	0.2

*U.S. is reference

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