

CAHIER DE RECHERCHE #1303E
Département de science économique
Faculté des sciences sociales
Université d'Ottawa

WORKING PAPER #1303E
Department of Economics
Faculty of Social Sciences
University of Ottawa

The Immigrant Wage Gap in Canada: Differences between the Public and the Private Sector

Serge Nadeau*

October 2013

* Department of Economics, University of Ottawa, 120 University, Ontario, Canada, K1N 6N5; Email: serge.nadeau@uottawa.ca.

Abstract

This paper uses 2006 Canadian census data to examine patterns of wage differentials between immigrants and Canadian natives across the public and private sectors. Results reveal that the wage gap is much more a private sector issue than a public sector issue: the average wage gap is in favour of Canadian natives in the private sector but in favour of immigrants in the public sector; compared to natives, immigrants earn significantly less per year of domestic schooling and per year of domestic work experience in the private sector than in the public sector; foreign schooling and foreign work experience are less rewarded in the private sector than in the public sector; and, immigrants from non-traditional source countries are more at a disadvantage in the private sector than in the public sector.

Key words: Wage differentials, immigrants vs. Canadian-born individuals, public vs. private sector, switching regression model, immigration policies.

JEL Classification: J200.

Résumé

Cet article utilise les données du recensement canadien de 2006 pour examiner les écarts de salaires entre les immigrants et les canadiens de naissance dans les secteurs public et privé. L'analyse suggère que l'écart salarial est beaucoup plus prononcé dans le secteur privé que dans le secteur public: l'écart de salaire moyen est en faveur des canadiens de naissance dans le secteur privé, mais en faveur des immigrants dans le secteur public ; par rapport aux canadiens de naissance, les années de scolarité et les années d'expérience de travail sont moins bien rémunérées dans le secteur privé que dans le secteur public (que ces années aient été acquises au Canada ou à l'étranger); et, les immigrants venant de pays non traditionnels ont des salaires relativement moins élevés dans le secteur privé que dans le secteur public.

Mots clés : Différences de salaire, immigrants versus personnes nées au Canada, secteur public versus secteur privé, modèle de régression avec changement de régime, politiques d'immigration.

Classification JEL : J200.

1. Introduction

Canada is a nation of immigrants. For example, in 2006, almost 20 percent of all Canadians were born abroad—the highest proportion in 75 years (Statistics Canada 2009). Further, while net international immigration contributed to about two-thirds of Canada's population growth between 2001 and 2006, it could become the only source of population growth by about 2030 (Statistics Canada 2007). While immigration undoubtedly contributes to the quality of life of Canadians by achieving humanitarian objectives and increasing social diversity, it is not clear that it adds to their economic well-being. A key issue is that immigrants' labour market performance is not as good as that of Canadian natives in terms of both participation rates and earnings.¹ A number of researchers even argue that immigration in Canada may have resulted in a lower average wage for Canadians, and may also have had a negative net fiscal impact on public resources (see, for example, Aydemir and Borjas 2007 and Grubel 2009). Given this context, it is important to understand for immigration and labour market policy development purposes the extent and the causes of the immigrants' relatively poor labour market performance. Indeed, improving the labour market integration of Canadian immigrants would be beneficial not only for the immigrants themselves but also for the economy as a whole.²

The literature on the labour market performance of Canadian immigrants has so far exclusively focused on the whole economy. In that context, studies have shown that immigrants earn on average three to four percent less than Canadian natives (depending on the sample used) even though they have more years of schooling and more years of labour market experience than the latter. Explanations for this include the lower quality of skills of immigrants—schooling and

¹Studies that document or review the literature on the relatively poor economic performance of Canadian immigrants include Bloom, Grenier and Gunderson (1995), Aydemir and Skuterud (2005), Picot and Sweetman (2005), Reitz (2006, 2007a, 2007b), Green and Worswick (2010), Nadeau and Seckin (2010), Grenier and Nadeau (2011) and Coulombe, Grenier and Nadeau (2012).

²For example, Dungan, Fang and Gunderson (2013) estimate that the current intake of approximately 250,000 immigrants a year reduces Canada's real GDP per capita over 10 years by a stream equivalent of roughly \$60 a year. However, if immigrants earned as much as their Canadian born counterparts, then immigration would increase real GDP per capita over 10 years by a stream equivalent of about \$200 a year (or about \$800 for a family of four), which is not negligible.

work experience acquired in an immigrant's country of birth may be not as worthy to employers as that acquired in Canada (Bonikowska, Green and Riddell 2008 and Coulombe, Grenier and Nadeau 2012); the lack of recognition of foreign credentials—many immigrants may have the right skills but they are not recognized by employers because of institutional reasons (Reitz 2005); and labour market discrimination—immigrants may be paid less than equally productive Canadian born workers (Oreopoulos 2009).

Although ignored in the literature, there are several reasons why one could expect the immigrant wage gap to be different between the public and the private sector.³ On one hand, more union coverage and more rigid selection and promotion rules in the public sector (which often focuses on rewarding the quantity as opposed to the quality of an applicant's human capital)⁴ should result in a narrower average wage gap between immigrants and Canadian natives in that sector. In the same manner, firms being on average larger in the public sector means that there are more resources to check/evaluate immigrant credentials in that sector. On the other hand, since the majority group (that is, Canadian natives) controls the government, it is much easier to make a theoretical case for wage discrimination in the public sector than in the private sector because governments, unlike private businesses, are seldom subject to competitive market forces, which means that immigrants might be favoured in the private sector in that latter respect.

So, what we can conclude from this short discussion is that while there is reasonable ground to believe that the immigrant wage gap in the public sector might be different from that in the private sector, the nature (*e.g.*, the sign and the sources) of this difference is an empirical issue. To address this issue, in this paper, I use the 2006 Canadian census 20 percent sample master data file

³ See Gunderson (1979) and Mueller (1999) for studies comparing the wage determination process in the private sector with that in the public sector. Cain (1986) and Gunderson (2006) survey theories of wage discrimination in the private sector and the public sector. Hou and Coulombe (2010) provide a good summary of the reasons why the labour market performance of visible minorities could be different between the public and the private sector—many of the same reasons ostensibly apply to immigrants.

⁴ For example, in the government of Canada, if a job position requires a certain number of years of schooling, then an applicant who can demonstrate having acquired that schooling cannot be screened out on that ground, irrespective of where (*e.g.*, in what school, in what country) that schooling was acquired.

and a variation of the Blinder-Oaxaca decomposition technique that assumes that Canadian natives and immigrants are endogenously sorted between the public and the private sector. The findings of this study will help to steer research and policy efforts towards improving the labour market integration of immigrants in Canada.

This paper is organized as follows. Section 2 discusses the data used along with some general statistics. Section 3 presents the empirical framework. Section 4 discusses the empirical results and Section 5 concludes.

2. Data and Summary Statistics

I used data from the Statistics Canada *2006 Census Microdata Masterfile* for my analysis. There are several advantages to using this data including the large sample of immigrants and the detailed information on their country of birth, ethnic background, location of study and field of study. To eliminate as many extraneous factors as possible, the sample is limited to men and women aged between 18 and 64, who worked (full-time) more than 29 hours per week and more than 48 weeks per year in 2005, and who were not self-employed. The definition of the public sector is based on the 2006 census industry data coded to the *NAICS 2002* and encompasses *Public administration and services* (including *Defence services*), *Education* and *Health*. Canadian born individuals are assumed to have acquired their whole schooling and work experience in Canada. More details on the data and the variables used are provided in Appendix A.

Table 1 provide summary statistics on Canadian born and immigrant workers in the sample. These figures confirm a result that has been found elsewhere in the literature: whether for males or females, for the whole economy, immigrants earn about 3.0 to 3.5 percent less than Canadian natives despite being endowed with more years of schooling and more years of work experience.

(Table 1 approximately here)

There are, however, other results that can be derived from Table 1 that have not been noted elsewhere in the literature and that stand out. First, the probability of working in the public sector is significantly lower for immigrants than for natives: 13.0 percent compared with 19.6 percent for males and 27.5 percent compared with 36.6 percent for females.⁵ This suggests that immigrants and natives may not be sorted randomly between the two sectors. The second (and probably most striking) new result is that there is no immigrant wage gap in the public sector: in fact, if anything, on average, immigrants earn more in the public sector than their Canadian born counterparts (see Table 2). The entire wage gap comes from the private sector: male immigrants in the public sector earn on average 3.1 percent more than their native counterparts while they earn 3.5 percent less in the private sector (the equivalent figures for females are respectively 0.6 percent and 0.5 percent).

(Table 2 approximately here)

It is particularly intriguing that the nature of the immigrant wage gap in the public sector is so different from that in the private sector. The rest of this paper provides elements of explanation for this state of affairs. Specifically, it compares the sources of the wage gap in the public sector—in terms of differences in observed skills (e.g., schooling, work experience) and returns to skills between immigrants and Canadian natives—with those in the private sector.

3. Methodology

I assume that there are two distinct labour markets in Canada: the public sector labour market and the private sector labour market; and that the wage determination process within these markets is different between immigrant and Canadian natives. Let the superscripts N and I and the superscripts G and P respectively denote *Native*, *Immigrant*, *Public sector* and *Private sector*; X denote a vector of human capital determinants of earnings (e.g., language skills, schooling, potential experience) and other control variables (e.g., region of residence, marital status); and, Y denote a

⁵ The result that immigrants are less likely than Canadian natives to work in the public sector should not be too surprising because many jobs in the public sector (especially in *Public administration* and *Defence services*) require Canadian citizenship.

vector of immigrant specific characteristics (*e.g.*, country of birth, pre-immigration years of schooling, pre-immigration labour market experience, Canadian citizenship). Assume further that that the selection of workers between the public and the private sectors may not be random.⁶ Thus, building on Hartog and Oosterbeek (1993), the log wages of Canadian natives is modeled as

$$w_{Pi}^N = X_{Pi}^N \beta_P^N + \varepsilon_{Pi}^N, \quad (1a)$$

$$w_{Gi}^N = X_{Gi}^N \beta_G^N + \varepsilon_{Gi}^N, \quad (1b)$$

$$I_i^N = \delta^N (w_{Pi}^N - w_{Gi}^N) + Z_i^N \phi^N + v_i^N, \quad (1c)$$

and the log wages of Canadian immigrants as

$$w_{Pi}^I = X_{Pi}^I \beta_P^I + Y_{Pi} \gamma_P + \varepsilon_{Pi}^I, \quad (2a)$$

$$w_{Gi}^I = X_{Gi}^I \beta_G^I + Y_{Gi} \gamma_G + \varepsilon_{Gi}^I, \quad (2b)$$

$$I_i^I = \delta^I (w_{Pi}^I - w_{Gi}^I) + Z_i^I \phi^I + v_i^I, \quad (2c)$$

where I_i is a latent variable that determines whether individual i works in the private sector (if $I_i > 0$) or in the public sector (if $I_i < 0$); Z is a vector of characteristics that influence the sector where an individual works (but not the wages); the β , δ , γ and ϕ are coefficient vectors to be estimated; and the ε 's and v 's are error terms that are assumed to be independent of all explanatory variables and multivariate normal with mean zero and some covariance matrix Σ . Under these assumptions, the model corresponds to the standard switching regression model used in numerous studies and the coefficient vectors can be estimated by maximum likelihood, which leads to consistent and asymptotically efficient estimates.

⁶ There are several theoretical reasons why the selection of workers between the public and the private sectors may not be random. For example, highly-capable but risk-averse individuals may be willing to trade lower wages at the top end of the distribution for more job security and choose to work in the public sector. See, for example, the discussions in Gunderson (1979) and Dustmann and van Soest (1998). Further, as previously noted, the observed likelihood of working in the public sector is much lower for immigrants than for Canadian natives.

Following Neuman and Oaxaca (2004), given (1) and (2), the average immigrant wage gap within a labour market, the private sector's labour market for example, can be (approximately) decomposed as the sum of four components:

$$(\bar{w}_p^I - \bar{w}_p^N) \approx (\bar{X}_p^I - \bar{X}_p^N) \hat{\beta}_p^N + \bar{X}_p^N (\hat{\beta}_p^I - \hat{\beta}_p^N) + \bar{Y}_p \hat{\gamma}_p + (\theta^I \bar{\lambda}_p^I - \theta^N \bar{\lambda}_p^N), \quad (3)$$

where the overlined variables denote sample means; θ^j is the product of the estimated standard deviation of ε_{pi}^j and the estimated correlation coefficient between v_i^j and ε_{pi}^j ($j = N, I$); and the λ 's are the relevant inverse Mills ratios.⁷ The first term in the decomposition (3) is the *explained* component of the wage gap. This component measures the portion of the wage gap due to differences between the observed attributes of immigrants and those of Canadian natives. The second term in equation (3) is the *unexplained* component of the wage gap. This component reflects differences in returns to observed attributes, which may result from a number of factors including differences in unobserved attributes that are complementary to observed attributes (*e.g.*, motivation) and, possibly, labour market discrimination. The third and fourth terms respectively measures the contribution of *immigrant specific characteristics* and of *selection* effects to the observed immigrant wage gap.⁸

Estimation considerations

Four wage equations must be estimated: one Canadian-born worker equation and one immigrant worker equation for each labour market. Table 3 and tables B1 and B2 in appendix list the

⁷ For example, for immigrants in the private sector, $\lambda_p^I = f(Z_p^I \phi^I) / F(Z_p^I \phi^I)$ where f is the normal p.d.f. and F is the normal c.d.f. Note that for the wage gap in the public sector, the inverse Mills ratio is measured for immigrants, for example, as $\lambda_G^I = -f(Z_G^I \phi^I) / \{1 - F(Z_G^I \phi^I)\}$.

⁸ As in other studies of immigrant wages, because of data limitation, this paper ignores the potential selection bias coming from an individual's decision to immigrate (or not to immigrate) to Canada. If there is positive selection, that is, if immigrants are more able or more motivated than natives as is sometimes suggested (see, for example, Chiswick 1979) then the unexplained component of the wage gap will be overestimated. Note, however, that the view that immigrants may be positively selected is not unanimous (see, for example, Borjas 1987).

variables used in the analysis and reports the associated coefficient estimates. A few observations are in order.

First, the vector X is very standard. It includes the human capital variables: *Language spoken*, *Years of Schooling* and *Years of work experience*; and the socio-economic control variables: *Region of residence*, *Urban-rural area* and *Marital status*. Other variables that could be included are occupation and industry. However, if discrimination in part results in immigrants ending up into lower-paid occupations and industries, then the inclusion of these variables would underestimate the disadvantage of immigrants in the labour market.

Second, the choice of the variables included in the immigrant specific characteristic vector Y draws heavily from the literature on the determinants of immigrant wages. Following Schaafsma and Sweetman (2001), Frenette and Morissette (2005), Aydemir and Skuterud (2005), Green and Worswick (2010) and Coulombe, Grenier and Nadeau (2012), I allow for the returns to pre-immigration schooling and work experience to be different from the returns to schooling and work experience acquired in Canada and, more generally, for the transferability of skills of immigrants to vary depending on their country of birth. To that end, I include the variables *Foreign schooling*, *Foreign experience* and *Country of birth* fixed effects. Further, as it seems reasonable to assume that the returns to pre-immigration schooling may be lower if the highest diploma is acquired outside Canada, I interact the *Foreign schooling* variable with a dichotomous variable (*Foreign diploma*) that takes a value of one if the highest diploma has been acquired outside Canada and zero otherwise. To allow for the possibility that Canadian citizenship increases earnings (see, for example, Bratsberg, Ragan and Nasir 2002, DeVoretz and Pivnenko 2006 and Nadeau and Seckin 2010), I incorporate in Y a dichotomous variable (*Canadian citizenship*) that takes the value one if the immigrant is a Canadian citizen and zero otherwise.

Third, the choice of the variables included in the vector Z in the public-private sector selection equations is crucial for the validity of the analysis. Ideally, the variables in Z should be strongly correlated with the choice of whether to work in the public or the private sector but weakly

correlated with wages. The variables that I use are: *Field of study* fixed effects, *Capital city* (which is a dichotomous variable that takes the value of one if the individual lives in a capital city and zero otherwise) and *Ethnic origin* fixed effects (which are included only in the natives' public sector-private sector choice equations).⁹ The reasons why these variables should be correlated with the choice of whether to work in the public sector or the private sector are to a large extent self-evident: one would expect that certain fields of study would lead to a different probability of working in the private sector than in the public sector (for example, a specialization in public administration should lower the likelihood of working in the private sector); working in a capital city should increase the probability of working in the public sector; and, because of cultural factors, we should expect that individuals of certain ethnic origins (*e.g.*, French), would be more likely to work in the public sector than individuals of other ethnic origins. What is more difficult to gauge though is the extent to which these variables are uncorrelated with wages. Indeed, one could argue that all of them are to some extent correlated with wages. For example, if there is racial discrimination in the labour market (as some authors such as Oreopoulos 2009 may have found), then *Ethnic origin* would be correlated with wages, which means that the coefficients in the wage equations would still be biased even after correcting for self-selection.

4. Empirical results

The coefficient estimates of the wage regression equations are reported in Table 3 and tables B1 and B2 in appendix.¹⁰ The difference in the coefficients (once multiplied by 100) can be interpreted as approximate percentage difference in returns.

⁹ The *Ethnic origin* fixed effects variables are not included in the immigrants' public sector-private sector choice equations because the immigrants' wage equations already incorporate *Country of birth* fixed effects.

¹⁰ The estimated coefficients of the selection equations are not reported here but are available. The OLS estimated returns to human capital variables are reported in tables B3, B4 and B5 in appendix. It is worth noting that in general, except possibly for the returns to the language skill and total/domestic schooling variables, these coefficients are very similar to those in Table 3.

Some general observations about results that hold for both sectors are in order. From Table 3, we observe that the estimated returns to human capital variables conform to what theory predicts and what has been found elsewhere in the literature (see, for example, Coulombe, Grenier and Nadeau 2012): whether for natives or immigrants, males or females, wages increase with the total number of years of schooling and the total number of years of work experience (in an inverse U-shape manner in the latter-case), but, for immigrants, the returns to foreign schooling and foreign work experience acquired outside Canada are lower than the returns to schooling and work experience acquired in Canada.¹¹ For example, a female immigrant who studied (and graduated) outside Canada and works in the private sector earns about 0.8 percent less per year of schooling than if she had studied and graduated in Canada, and she earns 0.9 percent less for an additional year of work experience acquired outside Canada than if acquired in Canada (see Table 3).¹² A finding that is intriguing though is that except for male immigrants in the public sector, immigrants generally earn less per year of schooling and work experience than Canadian born individuals even if they have acquired this schooling and this work experience in Canada,¹³ and this difference is especially acute in the private sector. For example, male immigrants in the private sectors earn 1.7 percent less for an extra year of domestic schooling and 0.8 percent less for an extra year of domestic work experience than their Canadian born counterparts (the equivalent figures for females are respectively 2.0 percent and 0.3 percent).

(Table 3 approximately here)

¹¹ This result is consistent with what has been found in other studies such as Aydemir and Skuterud (2005) and Green and Worswick (2009). Coulombe, Grenier and Nadeau (2012) argue that the reason why the returns to schooling and work experience acquired in an immigrant's country of birth is lower than that acquired in Canada is because the quality of human capital in most of these countries is lower than that in Canada.

¹² Since the model is non-linear in work experience, this marginal return is calculated at the mean years of work experience of female immigrants.

¹³ Given the regression set-up, the estimated coefficients associated to *Total schooling* and *Total Experience* in Table 3 also correspond to the estimated coefficients associated to domestic schooling and domestic work experience.

Another general observation concerns the returns to language skills. As expected, the results show that whether one is a Canadian native or an immigrant, a male or a female, it pays to know one Canada's official languages—especially if it is English. For example, on average, male immigrants in the private sector who do not know either English or French earn 1.8 percent less than if they only knew French, 12.6 percent less than if they only knew English and 17.0 percent less than if they knew both official languages (see Table 3).

4.1 Differences in returns to skills across sectors

One result that stands out is that the returns to schooling and work experience are generally higher in the private sector than in the public sector (which is the opposite of what Gunderson 1979 found using data from the 1971 Canadian census). However, schooling and work experience acquired abroad (that is, in an immigrant's country of birth) are more discounted in the private sector than in the public sector. For example, for a female immigrant who has acquired her highest diploma in her country of birth, the return to one year of schooling acquired in her country of birth is discounted 0.3 percent more in the private sector than in the public sector (-0.8 percent compared with -0.5 percent—see Table 3) and the return to an additional year of work experience is discounted by 0.3 percent more in the private sector than in the public sector (-0.9 percent compared with -0.6 percent).

Whether for immigrants or Canadian natives, the penalty for not knowing one of Canada's official languages is larger in the private sector than in the public sector. However, the penalty is generally higher for Canadian natives than for immigrants: for example, in the private sector, immigrants who cannot speak either English or French earn 17 percent less than immigrants who can speak both official languages while the equivalent figure is 25.1 percent for Canadian natives. It is also interesting to note that the premium to bilingualism is generally the highest for immigrants working in the private sector.

Finally, of particular interest is the sign and magnitude of the coefficient estimates of the inverse Mills ratios (the θ 's): they are negative in the private sector regressions and positive in the public sector regressions. Since the inverse Mills ratios are themselves positive in the private sector regressions and negative in the public sector regressions, this suggests that males and females are on average negatively selected in both the private sector and the public sector: individuals (male or female) who chose to work in either the private or the public sector earn less in the sector they chose to work than an individual chosen at random from the population would have earned working in that sector. This says that other factors beside earnings enter an individual's sector of work decision process.

4.2 Oaxaca-Blinder Decomposition

The estimates of the decomposition of the wage gaps outlined in (3) are reported in Table 4.¹⁴ More refined results of the impact of the *Country of birth* fixed effects on the wage gap—to reflect the fact that these effects can vary depending on whether or not countries are traditional source countries of immigration for Canada (*i.e.*, the U.S. and Western Europe) and have an ethnic make up similar to Canada's—are reported in Table 5.¹⁵

It is well known that based on endowments alone, Canadian immigrants should earn more than Canadian natives as they have, in general, more years of schooling and more years of work experience. What is interesting though is that this endowment advantage is even larger in the

¹⁴From Oaxaca and Ransom (1999), the detailed decomposition of the unexplained component in (3) is not invariant to the choice of reference groups when dichotomous variables are used in the regression equations. To solve this problem, I adapt the approach proposed in Gardeazabal and Ugidos (2004) and Yun (2005) to the switching regression model used in this paper and restrict the sum of the estimated coefficients of each set of dichotomous variables to zero in performing the decomposition (3).

The OLS based estimates of the Oaxaca-Blinder decomposition are reported in Table B6 in appendix. The results are remarkably similar to those in Table 4.

¹⁵Note that the difference between the *Country of birth fixed effect* component of the wage gap in the private sector and that in the public sector can itself be decomposed between a difference in composition effect and a difference in returns effect. Algebraically, using the notation introduced in Section 3, if we let the superscript C denote the subset of *Country of birth* variables in the vector Y , then the difference between the *Country of birth fixed effect* component of the wage gap in the private sector and that in the public sector as $(\bar{Y}_P^C - \bar{Y}_G^C)\hat{\gamma}_G^C + \bar{Y}_G^C(\hat{\gamma}_P^C - \hat{\gamma}_G^C)$ where the first component represents the difference in composition effect and the second component represents the difference in returns effect. The resulting figures are reported in the last column of Table (5).

private sector than in the public sector (as a point of fact, it is 29.2 percent relatively larger for males and 29.5 percent for females—see Table 4). This mostly has to do with work experience: compared to Canadian natives, immigrants have relatively more years of work experience in the private sector than in the public sector and, as previously noted, an additional year of work experience is more rewarded in the private sector than in the public sector.

(Table 4 approximately here)

The major reason though why the wage gap is to the advantage of natives in the private sector while it is to the advantage of immigrants in the public sector is that except for females working in the public sector, the unexplained component of the wage gap is much more to the advantage of natives in the private sector than in the public sector. In fact, for males, the unexplained component of the wage gap is about 60 percent more to the advantage of natives in the private sector than in the public sector and, for females, while it is to the advantage of natives in the private sector, it is to the advantage of immigrants in the public sector.¹⁶ This reflects the fact that except for female schooling in the public sector, immigrants' domestic schooling and work experience are significantly less rewarded in the private sector than in the public sector.

Another factor that explains why the wage gap is to the advantage of natives in the private sector while it is to the advantage of immigrants in the public sector is that foreign schooling and foreign experience are significantly more discounted in the private sector than in the public sector.

¹⁶ The finding that the unexplained component of the wage gap is in favour of immigrants in the case of females working in the public sector is interesting in and of itself. It mostly reflects the fact that for the estimated constant term in the public sector-immigrant female wage equation is much larger than that in the public sector-native female wage equation. This suggests that while the returns to schooling and work experience might be lower for female immigrants than for female natives, there might be an intrinsic preference for female immigrants that compensates for that in the public sector. This may also just reflect the fact that females in the public sector have more unobservable human capital qualities (*e.g.*, motivation) than their native counterparts.

Another interesting result, albeit not germane to the central point of this study, is that the unexplained components of the wage gaps are much more in favour of natives in the case of males than in the case of females. This reflects the fact that the differences between the estimated constant terms in the regressions are much more in favour of immigrants in the case of females than in the case of males, which suggest that the returns to the human capital variables omitted in the regressions are significantly larger for female immigrants than for male immigrants.

For males, for example, this accounts for two-thirds of the difference between the immigrant wage gap in the private sector and that in the public sector.

Finally, it should be noted that differences in selectivity have relatively little impact on the wage gaps, except for females in the public sector. All other things equal, immigrant females in the public sector earn on average 9.1 percent less than their Canadian born counterparts just because they are more negatively selected than the latter (see Table 4). The reasons for this are unclear and should be the object of further research.

4.3 *The role of discrimination*

An issue that is very sensitive but hard to avoid when analyzing average wage gaps between socio-economic groups is the role of discrimination in explaining those gaps. The impact of discrimination on the immigrant wage gap can enter the model in this paper through two main channels: the unexplained component of the wage gap (which picks up the impact of differential returns to skills between immigrants and natives) and the *Other source countries—Country of birth fixed effect* component of the wage gap (which may pick up ethnic minority effects). Note that these variables are very incomplete measures of the extent of the impact of discrimination on wages as they may pick up other effects as well such as differences in motivation (see Altonji and Blank 1999 for a review of issues related to the measurement of labour market discrimination). Nevertheless, these measures are useful because if they are not significantly smaller than zero, then they do not provide evidence of discrimination.

From the results of this study, one can make a number of observations regarding discrimination. An important observation is that the empirical results do not provide any evidence that female immigrants might be discriminated against in the public sector as both the unexplained

component and the *Other source countries—Country of birth fixed effect* component of the wage gap are not significantly negative for females in that sector (see Table 4 and Table 5).¹⁷

However, one cannot discard the possibility of discrimination against male immigrants in both the private and the public sectors and against female immigrants in the private sector as both the unexplained component and the *Other source countries—Country of birth fixed effect* component of the wage gap are significantly negative in these instances. Further, one cannot discard the possibility that most of this discrimination could be ethnicity based. For example, for males in the private sector, given that immigrants from traditional source countries represent about 30 percent of all the immigrants working in that sector, one can estimate using figures in Table 4 and Table 5, that immigrants from traditional source countries earn on average 2.8 percent¹⁸ more than their similarly skilled (including same number of years of domestic schooling and work experience) Canadian-born counterparts while the equivalent figure for immigrants from non-traditional source countries is -18.8 percent.¹⁹ Again, though, one must be careful with this conjecture because these figures might just be a reflection that immigrants from non-traditional source countries may have lower human capital quality than immigrants from traditional source countries as they come from countries that are less economically developed (see Coulombe, Grenier and Nadeau 2013 and Lagakos, Moll, Porzio and Qian 2012 for discussions on the relationship between human capital quality and economic development).

Another observation is that male immigrants might generally be more at a disadvantage than female immigrants. For example, in the private sector, the unexplained component of the wage

¹⁷ It is puzzling that the result of no-discrimination holds only for female immigrants in the public sector. This might reflect though the pressure there is in Canada to increase the representation of women and racial minority groups in the public sector.

¹⁸ This figure is calculated as $(-0.160 + 0.021 + 0.05/0.3)$.

¹⁹ To provide a perspective, Hou and Coulombe (2010) their study of natives, find that black males, for example, earn 19.2 percent less than white males even after controlling for the usual human capital attributes (*e.g.*, education, experience) including work characteristics (*e.g.*, working time, occupation and industry).

gap is almost five times more negative for males than for females (see Table 4), while, in the public sector, it is negative for males but positive for females.

Finally, discrimination, if there is any, might be more of a private sector issue than a public sector issue. As previously noted, the unexplained component of the wage gap is generally much less in favour of immigrants in the private sector than in the public sector (in fact, for females, it is actually in favour of immigrants in the public sector). Further, immigrants from non-traditional source countries appear to be relatively more at a disadvantage in the private sector than in the public sector: for both male and females, immigrants from non-traditional source countries are paid relatively less in the public sector than in the private sector, which is the opposite of what we observe for immigrants from traditional source countries (see the *Difference in returns* components of the *Country of birth fixed effects* in Table 5).

5. Conclusion

This paper uses 2006 Canadian census data to examine the wage gaps between immigrant and Canadian-born individuals across the public and the private sectors for both males and females. Several results stand out. First, although compared to Canadian-born individuals, immigrants have relatively more years of schooling and more years of work experience in the private sector than in the public sector, the average wage gap is in favour of Canadian-born individuals in the private sector but in favour of immigrants in the public sector. Second, compared to natives, immigrants earn significantly less per year of domestic schooling and per year of domestic work experience in the private sector than in the public sector (this is in fact the major reason why the wage gap is in favour of natives in the private sector but to the advantage of immigrants in the public sector). Third, foreign schooling and foreign work experience are also less rewarded in the private sector than in the public sector. Fourth, the only case where in my view, one can safely discard the possibility of discrimination against immigrants is that of females in the public sector. Fifth,

immigrants from non-traditional source countries appear to be relatively more at a disadvantage in the private sector than in the public sector.

A common thread in these findings is that the immigrant wage gap is much more of an issue in the private sector than in the public sector. This suggests that most of future gains in improving the labour market integration of immigrants could come from the private sector. In particular, I would argue that understanding better why the immigrants' returns to domestic schooling and domestic work experience are (compared to those enjoyed by Canadian natives) so much lower in the private sector than in the public sector might bring us a long way toward developing more effective policies to increase the economic contribution of immigrants in Canada.

References

- Altonji, Joseph G., and Rebecca M. Blank. 1999. Race and Gender in the Labor Market. In *Handbook of Labor Economics*, Vol. 3C, eds. Orley Ashenfelter and David Card, 3143–3259. Amsterdam: Elsevier
- Aydemir, Abdurrahman and George J. Borjas. 2007. "A Comparative Analysis of the Labor Market Impact of International Migration: Canada, Mexico, and the United States." *Journal of the European Economic Association* 5(4): 663-708.
- Aydemir, Abdurrahman and Mikal Skuterud. 2005. "Explaining the Deteriorating Entry Earnings of Canada's Immigrant Cohorts, 1966 - 2000." *Canadian Journal of Economics* 38(2): 641-671.
- Bloom David E., Gilles Grenier and Morley Gunderson. 1995. "The Changing Labour Market Position of Canadian Immigrants." *Canadian Journal of Economics* 28(4b):987-1005.
- Bonikowska, Aneta, David Green and W. Craig Riddell 2008. Literacy and the Labour Market: Cognitive Skills and Immigrant Earnings. Catalogue no. 89-552-M, Research Report No. 20. Green, David A. and Christopher Worswick. 2010. "Entry Earnings of Immigrant Men in Canada: The Roles of Labour Market Entry Effects and Returns to Foreign Experience" in *Canadian Immigration: Economic Evidence for a Dynamic Policy Environment*, eds. Ted McDonald, Elizabeth Ruddick, Arthur Sweetman, and Christopher Worswick (Montreal and Kingston: McGill Queen's University Press, Queen's Policy Studies Series), pp. 77-110.
- Borjas, George J. 1987. "Self-selection and the earnings of immigrants." *American Economic Review* 77(4):531-553.
- Bratsberg, Bernt, James F. Ragan and Zafar M. Nasir 2002. "The Effect of Naturalization on Wage Growth: A Panel Study of Young Male Immigrants." *Journal of Labor Economics* 20(3):568-597.
- Cain, Glen G. 1986. "The Economic Analysis of Labor Market Discrimination: A Survey," in Orley Ashenfelter and Robert Layard, ed., *Handbook of Labor Economics* (New York: Elsevier)

- Chiswick, Barry R. 1999. "Are Immigrants Favorably Self-Selected?" *AEA Papers and Proceedings*, 89(2): 181-185.
- Coulombe, Serge, Gilles Grenier and Serge Nadeau 2012. *Human Capital Quality and the Immigrant Wage Gap*. Working paper No. 1212E. Ottawa: University of Ottawa, Department of Economics.
- Coulombe, Serge, Gilles Grenier and Serge Nadeau 2013. *Quality of Work Experience and Economic Development—Estimates using Canadian Immigrant Data*, Manuscript. University of Ottawa.
- DeVoretz, Don J. and Sergiy Pivnenko. 2006. "The Economics of Canadian Citizenship." *Journal of International Migration and Integration* 6(4): 435-468.
- Dungan, P, Fang, T, and Gunderson M. 2013 "The Macroeconomic Impact of Canadian Immigration: An Empirical Analysis Using the FOCUS Model." *British Journal of Industrial Relations* 51(1): 174-195.
- Dustmann, Christian and Arthur van Soest. 1998. "Public and private sector wages of male workers in Germany." *European Economic Review* 42(4): 1417-1441.
- Frenette, Marc, and René Morissette. 2005. "Will They Ever Converge? Earnings of Immigrant and Canadian-Born Workers over the Last Two Decades." *International Migration Review* 39(1): 228-257.
- Gardeazabal, Javier and Arantza Ugidos 2004. "More on Identification in Detailed Wage Decompositions." *Review of Economics and Statistics* 86(4):1034-1036.
- Green, David A. and Christopher Worswick. 2010. "Entry Earnings of Immigrant Men in Canada: The Roles of Labour Market Entry Effects and Returns to Foreign Experience" in *Canadian Immigration: Economic Evidence for a Dynamic Policy Environment*, eds. Ted McDonald, Elizabeth Ruddick, Arthur Sweetman, and Christopher Worswick (Montreal and Kingston: McGill Queen's University Press, Queen's Policy Studies Series), pp. 77-110.
- Grenier, Gilles and Serge Nadeau 2011. "Immigrant Access to Work in Montreal and Toronto", *Canadian Journal of Regional Sciences/Revue canadienne des sciences régionales* 34(1):pp. 19-33.
- Grubel, Herbert. 2009. "Recent Immigration and Canadian Living Standards" in *The Effects of Mass Immigration on Canadian Living Standards and Society*, ed. Herbert Grubel (Calgary and Montreal: The Fraser Institute), pp. 97-117.
- Gunderson, Morley. 1979. "Earnings differentials between the public and private Sectors." *Canadian Journal of Economics* 12(2):228-242.
- Gunderson, Morley. 2006. "Male-female wage differentials: How can that be?" *Canadian Journal of Economics* 39(1):1-21.
- Hartog, Joop and Hessel Oosterbeek. 1993. "Public and private sector wages in the Netherlands." *European Economic Review* 37(1):97-114.

- Hou, Feng and Simon Coulombe. 2010, "Earnings Gaps for Canadian Born Visible Minorities in the Public and Private Sectors." *Canadian Public Policy/Analyse de politiques* 36(3):29-43.
- Lagakos, David, Benjamin Moll, Porzio and Nancy Qian 2012. *Experience Matters: Human Capital and Development Accounting*. Manuscript. Princeton University.
- Mueller, Richard E. 1999. "Public-private sector wage differentials in Canada: evidence from quantile regressions." *Economic Letters* 60(2):229-235.
- Nadeau, Serge and Aylin Seckin. 2010. "The Immigrant Wage Gap in Canada: Quebec and the Rest of Canada." *Canadian Public Policy/Analyse de politiques* 37(1):265-285.
- Neuman, Shoshana and Ronald L. Oaxaca. 2004. Wage Differentials in the 1990s in Israel: Endowments, Discrimination, and Selectivity, Discussion paper no. 1362. Bonn: IZA.
- Oaxaca, Ronald L. and Michael R. Ransom 1999. "Identification in Detailed Wage Decomposition." *Review of Economics and Statistics* 81(1): 154-157.
- Oreopoulos, Philip. 2009. *Why Do Recent Immigrants Struggle in the Labour Market? A Field Experiment with 6,000 Resumes*, Working Paper No. 09-03. Vancouver: Metropolis British Columbia, Centre of Excellence for Research on Immigration and Diversity.
- Picot, Garnett and Arthur Sweetman. 2005. *The Deteriorating Economic Welfare of Immigrants and Possible Causes: Update 2005*. Research Report No. 262. Ottawa: Statistics Canada.
- Reitz, Jeffrey G. 2005. "Tapping Immigrants' Skills: New Directions for Canadian Immigration Policy in the Knowledge Economy." *IRPP choices* 11(1).
- Reitz, Jeffrey. 2006. *Recent Trends in the Integration of Immigrants in the Canadian Labour Market*. Ottawa: Human Resources and Social Development Canada.
- Reitz, Jeffrey. 2007a. "Immigrant employment success in Canada, part 1: Individual and contextual causes." *Journal of International Migration and Integration* 8: 11-36.
- Reitz, Jeffrey. 2007b. "Immigrant employment success in Canada, part II: Understanding the decline." *Journal of International Migration and Integration* 8: 37-62.
- Schaafsma, Joseph and Arthur Sweetman 2001. "Immigrants Earnings: Age at Immigration Matters," *Canadian Journal of Economics* 34(4): 1066-1099.
- Statistics Canada. 2007. "Study: Canada's Immigrant Labour Market." *The Daily (September 10, 2007)*. Ottawa: Statistics Canada.
- Statistics Canada. 2009. Immigration in Canada: A Portrait of the Foreign-born Population, 2006 Census: Immigration: Driver of population growth. Accessed January 5, 2011 at <http://www12.statcan.ca/census-recensement/2006/as-sa/97-557/p2-eng.cfm>
- Yun, Myeong-Su 2005. "A Simple Solution to the Identification Problem in Detailed Wage Decompositions." *Economic Inquiry* 43(4): 766-772.

APPENDIX A

DATA DESCRIPTION

The sample

To eliminate as many extraneous factors as possible, the sample is limited to men and women aged between 18 and 64, who worked (full-time) more than 29 hours per week and more than 48 weeks per year in 2005, and who were not self-employed. The sample is also restricted to individuals who obtained their (post-secondary) highest certificate, diploma or degree in their country of birth or in Canada according to the *Location of study* variable in the 2006 census. In the census, the variable location of study is reported only for individuals who have completed a postsecondary certificate, diploma or degree. For individuals without post-secondary certificate, diploma or degree, it is assumed that they had acquired their schooling in their country of birth except if they had immigrated to Canada before they turned 18, in which case it is assumed they had completed their schooling in Canada. Canadian born individuals are assumed to have acquired their whole schooling and work experience in Canada.

The definition of the public sector is based on the 2006 census industry data coded to the *NAICS 2002* and encompasses *Public administration and services* (including *Defence services*), *Education* and *Health*.

Dependent variable

The dependent variable is the natural logarithm of weekly earning. Weekly earning is calculated as wages and salaries reported for 2005 divided by the number of weeks worked in 2005. Some restrictions were applied to eliminate very small and very large values of earnings. Observations with annual wages less than \$1000 and less than \$2 per hour in the reference week were removed.

Independent variables

Wages are allowed to vary by a fixed effect across Canada. The model controls for six regions: the Atlantic Provinces, Quebec, Ontario (the reference category), the Prairies, Alberta and British Columbia.

The 2006 census does not provide a value for *Years of schooling*. To compute this value I use the information provided on the highest certificate, degree or diploma obtained in the way described in Table A1.

Table A1: Construction of Number of Years of Schooling Variable

Highest certificate, degree or diploma obtained	Estimated years of schooling
No certificate	8
High school certificate	12
Trade, apprenticeship, college or CEGEP certificates or diploma from a program of three months to less than one year	13
Trade, apprenticeship, college or CEGEP certificates or diploma from a program of one year to two years	14
University certificate or diploma below bachelor level	15
University bachelor level	16
University certificate or diploma above bachelor level	17
Masters	18
Doctorate (including medicine, dentistry and similar programs)	22

Potential experience is defined as *Age* minus *Years of schooling* minus 6. *Foreign experience* is measured as potential experience minus *Years since migration*, where *Years since migration* is calculated as 2005 minus the individual's year of immigration (that is, the year landed immigrant status was first granted). Domestic experience is defined as potential experience minus *foreign experience*.

For language skill, I use the variable *Knowledge of the official languages* (as evaluated by the respondents). The categories are (1) English only (the reference), (2) French only, (3) Both English and French, and (4) None of English and French.

The *Country of birth* fixed effects are classified as in Grenier and Nadeau (2011) where 48 countries or groups of countries are selected according to their importance as sources of immigration.

The *Field of study* and *Ethnic origin* fixed effects used in the public-private sector selection equations are respectively based on the *CIPCODE* and *Eth1* entries in the 2006 census.

Table 1: Common Characteristics of Immigrant and Canadian Born Individuals (2006)[†]

	Whole Economy		Private Sector		Public Sector	
	Canadian Born	Immigrants	Canadian Born	Immigrants	Canadian Born	Immigrants
Males						
<i>% of Population</i>	43.6	10.8	35.2	9.3	8.4	1.4
<i>Weekly earnings (\$)</i>	1194.4	1168.8	1190.9	1149.2	1209.8	1296.3
<i>Ln weekly earnings</i>	6.875	6.841	6.847	6.812	7.001	7.032
<i>Years of schooling</i>	13.3	14.2	13.0	13.9	14.8	16.3
<i>In Canada</i>	13.3	3.0	13.0	2.8	14.8	4.5
<i>In another country</i>	0	11.2	0	11.1	0	11.8
<i>Potential experience (years)</i>	21.7	24.0	21.5	23.9	22.6	24.4
<i>In Canada</i>	21.7	16.8	21.5	16.4	22.6	19.3
<i>In another country</i>	0	7.2	0	7.5	0	5.1
<i>Sample Size</i>	597,250	147,230	481,795	127,435	115,455	19,790
Females						
<i>% of Population</i>	36.9	8.7	23.2	6.4	13.7	2.4
<i>Weekly earnings (\$)</i>	843.8	823.4	779.3	767.8	956.3	976.0
<i>Ln weekly earnings</i>	6.586	6.556	6.481	6.477	6.768	6.774
<i>Years of schooling</i>	13.7	14.0	13.1	13.6	14.7	15.2
<i>In Canada</i>	13.7	3.1	13.1	2.8	14.7	4.0
<i>In birth country</i>	0	10.9	0	10.8	0	11.1
<i>Potential experience (years)</i>	21.6	24.0	21.1	23.7	22.5	24.8
<i>In Canada</i>	21.6	17.3	21.1	16.6	22.5	19.3
<i>In birth country</i>	0	6.7	0	7.1	0	5.5
<i>Sample Size</i>	505,425	119,635	317,440	87,420	187,985	32,215

[†]Averages except for *% of Population* and *Sample Size*. Full-time, full-year working individuals between 18 and 64. Canadian born individuals are assumed to have acquired all their schooling and work experience in Canada.

Source: Calculations from Statistics Canada 2006 census data.

Table 2: Observed Immigrant Wage Gaps (2006)[†]

	Males		Females	
	Wage Gap	t	Wage Gap	t
Entire Economy	-0.035	19.2	-0.030	16.5
Private Sector	-0.035	17.6	-0.005	2.1
Public Sector	0.031	7.8	0.006	2.2
<i>Difference</i>	-0.066	14.9	-0.011	3.0

[†]Difference between the average of the *log of weekly earnings* of immigrants and that of Canadian born worker.

Source: Calculations from Statistics Canada 2006 census data.

Table 3: Estimated Returns to Human Capital Variables—Switching Regressions Model[†]

	Private Sector			Public Sector		
	<i>Canadian Born</i> (1)	<i>Immigrants</i> (2)	(2) – (1)	<i>Canadian Born</i> (3)	<i>Immigrants</i> (4)	(4) – (3)
Males						
<i>Knowledge of official languages (Reference category: English only)</i>						
French only	-0.079 (18.)	-0.108 (8.2)	-0.030 (2.1)	-0.063 (11.)	-0.033 (1.2)	-0.030 (1.1)
English & French	0.024 (7.0)	0.044 (5.6)	0.021 (2.4)	0.045 (12.)	0.042 (3.6)	-0.003 (0.2)
None	-0.237 (4.4)	-0.126 (9.8)	0.111 (2.0)	-0.121 (1.7)	-0.088 (0.9)	0.033 (0.3)
Total schooling	0.090 (219)	0.073 (87.)	-0.017 (18.)	0.059 (80.)	0.062 (21.)	0.003 (1.1)
Foreign schooling		0.000 (0.7)			-0.001 (1.4)	
Foreign schooling • Foreign diploma		-0.003 (9.4)			0.000 (.71)	
Total experience	0.051 (171)	0.041 (53.)	-0.010 (12.)	0.043 (72.)	0.050 (27.)	0.007 (3.6)
Total experience ²	-0.080 (120)	-0.067 (38.)	0.013 (7.1)	-0.072 (56.)	-0.084 (22.)	-0.012 (3.0)
Foreign experience		-0.024 (24.)			-0.027 (10.)	
Foreign experience ²		-0.037 (12.)			-0.012 (1.4)	
Total experience • Foreign experience		0.065 (17.)			0.064 (7.3)	
<i>n</i>	481,795	127,435		115,455	19,790	
Inverse Mills Ratio coefficients (θ) [‡]	-0.105 (27)	-0.084 (10.)	0.021	0.040 (12.)	0.033 (2.5)	0.008
Females						
<i>Knowledge of official languages (Reference category: English only)</i>						
French only	-0.122 (25.)	-0.065 (4.5)	0.057 (4.4)	-0.023 (5.2)	-0.018 (0.9)	0.006 (0.3)
English & French	0.058 (16.)	0.105 (12.)	0.047 (5.1)	0.062 (21.)	0.058 (6.4)	-0.004 (0.4)
None	-0.179 (2.8)	-0.089 (7.6)	0.090 (1.4)	-0.036 (0.6)	0.016 (0.3)	0.051 (0.7)
Total schooling	0.103 (164)	0.083 (78.)	-0.020 (15.)	0.089 (109)	0.066 (27.)	-0.024 (9.2)
Foreign schooling		-0.002 (3.9)			-0.005 (7.4)	
Foreign schooling • Foreign diploma		-0.006 (15.)			0.000 (0.3)	
Total experience	0.045 (135)	0.037 (45.)	-0.008 (8.8)	0.035 (86.)	0.033 (25.)	-0.001 (0.8)
Total experience ²	-0.071 (95.)	-0.058 (31.)	0.013 (6.4)	-0.054 (61.)	-0.054 (20.)	0.000 (0.1)
Foreign experience		-0.026 (22.)			-0.018 (9.1)	
Foreign experience ²		-0.036 (10.)			-0.028 (4.6)	
Total experience • Foreign experience		0.070 (17.)			0.052 (7.9)	
<i>n</i>	317,440	87,240		187,985	32,215	
Inverse Mills Ratio coefficients (θ)	-0.091 (17.)	-0.111 (8.3)	-0.021	0.072 (19.)	0.155 (9.5)	-0.083

[†] Absolute t-ratio in parentheses. The dependent variable is $\ln(\text{weekly earnings})$. Also included in the regressions are five regions of residence indicators, marital status and urban area dummy variables and, for the immigrant regressions, one citizenship and 47 immigrant country of birth dummy variables (see Appendix B for these variables estimated coefficients). The estimated returns to the variables in experience squared have been multiplied by 100.

[‡] The t-ratios for the θ coefficients reported in the table are in reality the t-ratios associated with the correlation coefficients between the error terms in the selection equations and the error terms in the wage equations.

Source: Calculations from Statistics Canada 2006 census data.

Table 4: Decomposition of the Immigrant Wage Gap (2006)—Switching Regression Model

	Private Sector		Public Sector		Difference	
	Gaps (1)	t	Gaps (2)	t	Gaps (1) – (2)	t
Males						
Observed wage gap^a	-0.035	15.89	0.031	6.99	-0.066	13.34
Explained gap	0.186	108.51	0.144	63.08	0.042	14.62
Language	0.001	1.05	0.003	3.13	-0.001	0.74
Schooling	0.079	89.35	0.087	47.51	-0.008	4.04
Work experience	0.040	65.57	0.014	13.58	0.026	22.49
Others ^b	0.066	77.72	0.041	39.18	0.025	18.28
Unexplained gap	-0.160	24.15	-0.101	5.08	-0.059	2.82
Language	-0.021	1.59	-0.015	0.48	-0.006	0.19
Schooling	-0.236	18.26	0.043	1.09	-0.279	6.77
Work experience	-0.156	17.60	0.088	4.06	-0.244	10.43
Others	0.254	12.43	-0.216	3.31	0.470	6.86
Immigrant specific effects	-0.073	12.45	-0.018	1.54	-0.055	4.32
Citizenship	0.021	13.33	0.026	5.14	-0.005	0.90
Country of birth fixed effect	0.016	8.85	0.023	4.75	-0.007	1.33
Foreign schooling	-0.023	4.41	-0.010	1.15	-0.013	1.26
Foreign work experience	-0.087	29.99	-0.057	12.53	-0.031	5.72
Selectivity	0.015	n.a.	0.004	n.a.	-0.011	n.a.
Females						
Observed wage gap^a	-0.005	2.14	0.006	2.19	-0.011	3.04
Explained gap	0.149	67.63	0.115	67.7	0.033	11.98
Language	0.003	1.40	-0.003	3.43	0.005	2.50
Schooling	0.046	59.07	0.045	31.5	0.001	0.31
Work experience	0.041	80.40	0.024	33.1	0.017	18.73
Others ^b	0.059	64.86	0.048	55.2	0.011	8.46
Unexplained gap	-0.034	3.59	0.041	2.31	-0.074	3.73
Language	-0.039	2.54	-0.014	0.69	-0.025	1.02
Schooling	-0.274	14.72	-0.361	9.16	0.087	1.99
Work experience	-0.102	10.30	-0.026	1.60	-0.076	4.07
Others	0.381	15.29	0.441	6.94	-0.060	0.88
Immigrant specific effects	-0.122	18.78	-0.059	6.88	-0.063	5.91
Citizenship	0.021	11.4	0.017	4.94	0.003	0.79
Country of birth fixed effect	0.007	3.23	0.012	2.70	-0.005	0.98
Foreign schooling	-0.072	12.63	-0.050	7.34	-0.022	2.50
Foreign work experience	-0.078	26.07	-0.039	11.1	-0.040	8.59
Selectivity	0.003	n.a.	-0.091	n.a.	0.094	n.a.

^aDifference between the *log* of weekly earnings of immigrants and that of Canadian born individuals, which (once multiplied by 100) can be interpreted as approximate percentage differences in weekly earnings.

^bThe category *Others* include the *Region of residence*, *Urban area*, *Married* and the *Constant term* variables.

Source: Calculations from Statistics Canada 2006 census data.

Table 5: Decomposition of the Country of Birth Fixed Effects

	Private Sector		Public Sector		Difference	
	<i>Gaps</i> (1)	<i>t</i>	<i>Gaps</i> (2)	<i>t</i>	<i>Gaps</i> (1) – (2)	<i>t</i>
Males						
Country of birth fixed effect (total)^a	0.016	8.85	0.023	4.75	-0.007	1.33
<i>Traditional source countries^b</i>	0.050	39.8	0.036	10.5	0.014	3.92
Difference in composition	n.a		n.a		-0.024	23.1
Difference in returns	n.a		n.a		0.038	9.85
<i>Other source countries</i>	-0.034	23.5	-0.013	4.41	-0.021	6.66
Difference in composition	n.a		n.a		-0.010	12.8
Difference in returns	n.a		n.a		-0.011	3.55
Females						
Country of birth fixed effect (total)	0.007	3.23	0.012	2.70	-0.005	0.98
<i>Traditional source countries</i>	0.023	17.0	0.016	6.46	0.000	2.52
Difference in composition	n.a		n.a		-0.010	14.6
Difference in returns	n.a		n.a		0.017	5.67
<i>Other source countries</i>	-0.015	8.58	-0.004	1.24	-0.012	3.50
Difference in composition	n.a		n.a		-0.003	3.12
Difference in returns	n.a		n.a		-0.009	2.86

^aReproduced from Table 4.

^bU.S. and Western Europe.

Source: Calculations from Statistics Canada 2006 census data.

APPENDIX B

Table B1: Other Estimated Coefficients—Switching Regressions Model (Males)

	Private Sector				Public Sector			
	Canadian Born		Immigrants		Canadian Born		Immigrants	
	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t
<i>Constant term</i>	4.960	791.	5.451	288.	5.577	349.	5.470	96.8
<i>Urban-rural (Reference: rural)</i>	0.027	12.6	-0.020	2.13	0.039	12.0	0.006	0.43
<i>Marital status (Reference: single)</i>	0.229	119.	0.183	40.4	0.132	40.9	0.080	6.58
<i>Canadian citizenship (Reference: no)</i>			0.067	13.3			0.068	5.15
<i>Region of residence (Reference: Ontario)</i>								
Atlantic Canada	-0.273	77.7	-0.266	13.6	-0.158	34.4	-0.076	3.75
Quebec	-0.149	38.5	-0.230	27.7	-0.162	34.9	-0.171	12.0
Prairies	-0.131	26.1	-0.198	21.8	-0.131	26.1	-0.133	8.68
Alberta	-0.002	0.33	0.037	5.86	-0.002	0.33	-0.002	0.14
British Columbia	-0.062	13.9	-0.090	17.2	-0.062	13.9	-0.075	7.40
<i>Countries of birth (Reference category: United States)</i>								
Central America			-0.248	16.6			-0.236	7.30
Haiti			-0.300	13.7			-0.196	5.77
Jamaica			-0.219	14.3			-0.106	4.19
Trinidad			-0.203	10.8			0.009	3.07
Other Caribbean			-0.252	13.9			-0.142	3.72
Guyana			-0.189	11.4			-0.036	1.13
Other South-America			-0.185	12.2			-0.110	4.03
France			0.015	0.78			0.009	0.31
Germany			-0.059	3.44			-0.012	0.56
Other Western Europe			-0.048	2.61			0.006	0.29
Romania			-0.103	6.05			-0.128	3.18
Poland			-0.144	9.81			-0.082	3.10
Ukraine			-0.221	9.32			-0.193	3.36
Russia			-0.152	7.05			-0.122	2.66
Hungary			-0.163	5.83			-0.041	0.75
Other Eastern Europe			-0.171	8.27			-0.069	1.94
U.K.			0.037	2.84			0.043	2.84
Other Northern Europe			0.008	0.35			0.031	1.12
Greece			-0.265	11.1			-0.100	2.68
Italy			-0.037	2.43			-0.027	1.37
Portugal			-0.028	1.89			-0.096	3.81
Other Southern Europe			-0.105	6.94			-0.101	3.19
West Africa			-0.224	10.3			-0.101	3.03
East Africa			-0.201	12.2			-0.095	3.77
Algeria			-0.241	8.60			-0.071	2.00
Egypt			-0.091	3.47			-0.134	2.73
Morocco			-0.134	5.24			-0.077	2.08
Other Northern Africa			-0.273	11.2			-0.161	3.82
Southern Africa			0.172	6.48			0.182	4.13
Lebanon			-0.246	11.2			-0.108	2.74
Afghanistan			-0.493	15.8			-0.294	3.42
Iran			-0.244	11.2			-0.265	6.05
Iraq			-0.334	11.4			0.011	0.08
Other Western Central Asia			-0.147	7.45			-0.017	0.46
China			-0.327	22.8			-0.180	7.58
Hong Kong			-0.224	15.3			-0.035	1.57
South Korea			-0.381	14.6			-0.198	3.29
Taiwan			-0.318	11.4			0.036	0.55
Other East Asia			-0.129	3.66			-0.007	0.07
Philippines			-0.339	25.5			-0.205	10.2
Vietnam			-0.237	16.4			-0.088	2.66
Other South East Asia			-0.179	11.0			-0.055	1.72
India			-0.222	16.4			-0.032	1.47
Sri Lanka			-0.317	20.3			-0.046	1.29
Pakistan			-0.355	20.1			-0.067	1.61
Bangladesh			-0.545	21.1			-0.265	3.47
Others			-0.100	4.76			-0.180	0.51

Table B2: Other Estimated Coefficients—Switching Regressions Model (Females)

	Private Sector				Public Sector			
	Canadian Born		Immigrants		Canadian Born		Immigrants	
	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t
<i>Constant term</i>	4.604	528.	5.120	229.	5.102	312.	5.616	96.8
<i>Urban-rural (Reference: rural)</i>	0.088	33.3	0.042	3.85	0.050	19.9	0.014	1.19
<i>Marital status (Reference: single)</i>	0.047	22.5	0.016	3.68	0.008	3.54	-0.000	0.06
<i>Canadian citizenship (Reference: no)</i>			0.063	11.4			0.047	4.94
<i>Region of residence (Reference: Ontario)</i>								
Atlantic Canada	-0.285	74.7	-0.309	14.9	-0.188	52.3	-0.169	8.85
Quebec	-0.127	29.6	-0.226	25.6	-0.179	47.2	-0.184	16.2
Prairies	-0.148	37.5	-0.178	17.3	-0.130	33.7	-0.177	13.6
Alberta	-0.007	2.04	-0.060	8.39	-0.237	6.39	-0.072	7.25
British Columbia	-0.045	12.7	-0.089	15.8	-0.073	20.0	-0.081	10.5
<i>Countries of birth (Reference category: United States)</i>								
Central America			-0.213	12.3			-0.166	7.53
Haiti			-0.170	7.43			-0.139	5.63
Jamaica			-0.131	8.23			-0.079	4.83
Trinidad			-0.089	4.76			-0.030	1.49
Other Caribbean			-0.138	7.02			-0.122	6.10
Guyana			-0.093	5.34			-0.039	1.73
Other South-America			-0.145	8.77			-0.112	5.80
France			0.022	1.05			-0.010	0.51
Germany			-0.069	3.72			-0.040	2.16
Other Western Europe			-0.092	4.74			-0.075	4.03
Romania			-0.032	1.77			-0.049	1.99
Poland			-0.167	10.8			-0.101	6.35
Ukraine			-0.185	7.55			-0.178	4.38
Russia			-0.157	6.13			-0.128	3.15
Hungary			-0.150	5.03			-0.033	0.86
Other Eastern Europe			-0.124	5.66			-0.053	1.97
U.K.			-0.010	0.78			0.008	0.63
Other Northern Europe			0.007	0.30			0.108	0.41
Greece			-0.174	7.41			0.005	0.14
Italy			-0.079	4.83			-0.054	3.19
Portugal			-0.077	5.09			-0.052	2.61
Other Southern Europe			-0.087	5.28			-0.081	4.00
West Africa			-0.123	4.68			-0.053	1.73
East Africa			-0.105	6.14			-0.050	2.78
Algeria			-0.040	1.03			-0.035	0.76
Egypt			-0.052	1.60			-0.050	1.36
Morocco			-0.084	2.47			-0.060	1.66
Other Northern Africa			-0.170	5.11			-0.062	1.52
Southern Africa			0.115	3.93			0.070	2.58
Lebanon			-0.167	6.51			-0.077	2.08
Afghanistan			-0.282	7.47			-0.086	0.69
Iran			-0.157	6.83			-0.177	5.07
Iraq			-0.239	7.38			-0.163	2.02
Other Western Central Asia			-0.121	5.57			-0.070	1.97
China			-0.154	10.5			-0.025	1.27
Hong Kong			-0.041	2.74			0.043	2.54
South Korea			-0.168	6.20			-0.013	0.33
Taiwan			-0.133	4.78			-0.022	0.51
Other East Asia			-0.072	2.44			-0.106	1.85
Philippines			-0.208	15.2			-0.082	6.03
Vietnam			-0.133	8.54			-0.024	0.97
Other South East Asia			-0.047	2.68			-0.004	0.16
India			-0.206	14.7			-0.076	4.35
Sri Lanka			-0.261	14.7			-0.019	0.52
Pakistan			-0.271	11.6			-0.123	2.92
Bangladesh			-0.482	14.6			-0.215	2.75
Others			-0.076	3.49			0.004	0.13

Table B3: Estimated Returns to Human Capital Variables—OLS[†]

	Private Sector			Public Sector		
	Canadian Born (1)	Immigrants (2)	(2) – (1)	Canadian Born (3)	Immigrants (4)	(4) – (3)
Males						
<i>Knowledge of official languages (Reference category: English only)</i>						
<i>French only</i>	-0.094 (22.)	-0.116 (8.8)	-0.022 (1.6)	-0.053 (9.2)	-0.026 (1.0)	-0.026 (1.0)
<i>English & French</i>	0.011 (3.2)	0.039 (4.8)	0.027 (3.1)	0.051 (13.)	0.046 (3.9)	-0.005 (0.5)
<i>None</i>	-0.245 (4.5)	-0.128 (10.)	0.116 (2.1)	-0.111 (1.6)	-0.097 (0.9)	0.014 (1.1)
<i>Total schooling</i>	0.085 (223)	0.069 (86.)	-0.016 (18.)	0.065 (116)	0.067 (44.)	0.002 (1.1)
<i>Foreign schooling</i>		0.000 (0.7)			-0.001 (1.5)	
<i>Foreign schooling • Foreign diploma</i>		-0.003 (8.5)			-0.000 (.02)	
<i>Total experience</i>	0.051 (170)	0.041 (52.)	0.010 (12.)	0.044 (73.)	0.051 (27.)	0.007 (3.6)
<i>Total experience²</i>	-0.079 (120)	-0.066 (38.)	0.013 (6.9)	-0.073 (57.)	-0.085 (22.)	-0.012 (2.9)
<i>Foreign experience</i>		-0.023 (24.)			-0.028 (11.)	
<i>Foreign experience²</i>		-0.037 (12.)			-0.014 (1.6)	
<i>Total experience • Foreign experience</i>		0.063 (17.)			0.066 (7.6)	
<i>n</i>	481,795	127,435		115,455	19,790	
<i>R²</i>	0.30	0.26		0.29	0.31	
Females						
<i>Knowledge of official languages (Reference category: English only)</i>						
<i>French only</i>	-0.141 (30.)	-0.077 (5.3)	0.063 (4.1)	-0.008 (1.8)	0.004 (0.2)	0.011 (0.6)
<i>English & French</i>	0.047 (13.)	0.098 (11.)	0.051 (5.5)	0.066 (22.)	0.062 (7.1)	-0.004 (0.5)
<i>None</i>	-0.189 (2.9)	-0.087 (7.5)	0.102 (1.6)	-0.031 (0.5)	-0.032 (0.7)	-0.001 (.01)
<i>Total schooling</i>	0.096 (205)	0.076 (82.)	-0.020 (19.)	0.100 (194)	0.084 (63.)	-0.015 (11.)
<i>Foreign schooling</i>		-0.002 (3.9)			-0.005 (7.4)	
<i>Foreign schooling • Foreign diploma</i>		-0.005 (13.)			-0.003 (6.0)	
<i>Total experience</i>	0.044 (136)	0.036 (44.)	-0.008 (9.2)	0.035 (88.)	0.037 (29.)	0.001 (0.9)
<i>Total experience²</i>	-0.007 (95.)	-0.057 (31.)	0.013 (6.5)	-0.055 (61.)	-0.057 (21.)	-0.002 (0.7)
<i>Foreign experience</i>		-0.025 (22.)			-0.018 (9.3)	
<i>Foreign experience²</i>		-0.034 (10.)			-0.037 (6.2)	
<i>Total experience • Foreign experience</i>		0.069 (16.)			0.058 (8.9)	
<i>n</i>	317,440	87,240		187,985	32,215	
<i>R²</i>	0.26	0.24		0.32	0.26	

[†]Absolute t-ratio in parentheses. The dependent variable is $\ln(\text{weekly earnings})$. Also included in the regressions are five regions of residence indicators, marital status and urban area dummy variables and, for the immigrant regressions, one citizenship and 47 immigrant country of birth dummy variables (see Appendix B for these variables estimated coefficients). The estimated returns to the variables in experience squared have been multiplied by 100.

Table B4: Other Estimated Coefficients—OLS (Males)

	Private Sector				Public Sector			
	Canadian Born		Immigrants		Canadian Born		Immigrants	
	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t
<i>Constant term</i>	5.014	828.	5.481	292.	5.439	517.	5.355	148.
<i>Urban-rural (Reference: rural)</i>	0.025	12.0	-0.018	1.99	0.037	11.6	0.003	0.24
<i>Marital status (Reference: single)</i>	0.228	119.	-0.184	40.6	0.135	42.1	0.080	8.56
<i>Canadian citizenship (Reference: no)</i>							0.071	5.37
<i>Region of residence (Reference: Ontario)</i>								
Atlantic Canada	-0.284	82.0	-0.283	14.6	-0.151	33.1	-0.066	3.29
Quebec	-0.138	35.5	-0.227	27.4	-0.167	36.0	-0.173	12.1
Prairies	-0.171	0.99	-0.206	23.0	-0.125	24.9	-0.124	8.31
Alberta	0.090	29.1	-0.035	5.56	-0.002	0.5	0.007	0.06
British Columbia	-0.038	12.6	-0.093	18.0	-0.060	13.4	-0.071	7.08
<i>Countries of birth (Reference category: United States)</i>								
Central America			-0.241	16.2			-0.243	7.56
Haiti			-0.300	13.8			-0.193	5.68
Jamaica			-0.213	13.9			-0.109	4.30
Trinidad			-0.198	10.5			-0.099	3.17
Other Caribbean			-0.247	13.6			-0.145	3.79
Guyana			-0.184	11.1			-0.040	1.25
Other South-America			-0.177	11.6			-0.117	4.31
France			0.020	1.04			0.005	0.18
Germany			-0.055	3.20			-0.015	0.69
Other Western Europe			-0.041	2.27			0.006	0.07
Romania			-0.090	5.30			-0.140	3.55
Poland			-0.135	9.22			-0.090	3.47
Ukraine			-0.210	8.89			-0.202	3.52
Russia			-0.142	6.61			-0.132	2.89
Hungary			-0.155	5.55			-0.048	0.88
Other Eastern Europe			-0.160	7.77			-0.078	2.24
U.K.			0.411	3.14			0.042	2.73
Other Northern Europe			0.014	0.57			0.027	1.01
Greece			-0.260	11.0			-0.105	2.83
Italy			-0.031	2.04			-0.030	1.53
Portugal			-0.024	1.58			-0.099	3.93
Other Southern Europe			-0.095	6.30			-0.110	3.50
West Africa			-0.222	10.2			-0.105	3.13
East Africa			-0.197	12.0			-0.100	3.98
Algeria			-0.241	8.59			-0.073	2.06
Egypt			-0.084	3.18			-0.142	2.90
Morocco			-0.130	5.08			-0.079	2.14
Other Northern Africa			-0.271	11.2			-0.162	3.83
Southern Africa			0.179	6.75			0.179	4.06
Lebanon			-0.236	10.8			-0.117	3.01
Afghanistan			-0.488	15.7			-0.297	3.44
Iran			-0.238	11.0			-0.272	6.23
Iraq			-0.321	11.0			-0.007	0.05
Other Western Central Asia			-0.137	6.98			-0.027	0.74
China			-0.317	22.2			-0.192	8.26
Hong Kong			-0.214	14.6			-0.046	2.14
South Korea			-0.371	14.2			-0.209	3.47
Taiwan			-0.305	10.9			0.023	0.35
Other East Asia			-0.119	3.37			-0.018	0.20
Philippines			-0.333	25.1			-0.207	10.4
Vietnam			-0.227	15.8			-0.101	3.11
Other South East Asia			-0.170	10.4			-0.064	2.03
India			-0.213	15.7			-0.043	2.04
Sri Lanka			-0.310	19.8			-0.058	1.65
Pakistan			-0.344	19.6			-0.076	1.98
Bangladesh			-0.536	20.8			-0.278	3.65
Others			-0.097	4.63			-0.019	0.53

Table B5: Other Estimated Coefficients—OLS (Females)

	Private Sector				Public Sector			
	Canadian Born		Immigrants		Canadian Born		Immigrants	
	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t
<i>Constant term</i>	4.675	621.	5.178	246.	4.877	534.	5.148	179.
<i>Urban-rural (Reference: rural)</i>	0.091	34.6	0.046	4.24	0.045	18.0	0.007	0.61
<i>Marital status (Reference: single)</i>	0.045	21.9	0.015	3.52	0.011	5.13	0.004	0.64
<i>Canadian citizenship (Reference: no)</i>			0.060	11.0			0.055	5.89
<i>Region of residence (Reference: Ontario)</i>								
Atlantic Canada	-0.291	76.8	-0.327	15.8	-0.181	51.0	-0.139	7.54
Quebec	-0.114	27.1	-0.219	25.0	-0.188	49.9	-0.200	18.2
Prairies	-0.158	40.5	-0.193	19.4	-0.120	31.5	-0.146	11.9
Alberta	-0.008	2.20	-0.067	9.51	-0.022	5.93	-0.058	6.00
British Columbia	-0.047	13.3	-0.096	17.4	-0.071	20.2	-0.063	8.51
<i>Countries of birth (Reference category: United States)</i>								
Central America			-0.204	11.9			-0.175	8.07
Haiti			-0.181	7.95			-0.097	4.05
Jamaica			-0.133	8.42			-0.052	3.26
Trinidad			-0.081	4.41			-0.033	1.72
Other Caribbean			-0.138	7.02			-0.107	5.44
Guyana			-0.080	4.68			-0.058	2.60
Other South-America			-0.132	8.09			-0.135	7.25
France			0.027	1.27			0.003	0.14
Germany			-0.062	3.37			-0.053	2.95
Other Western Europe			-0.086	4.43			0.077	4.27
Romania			-0.012	0.66			-0.083	3.44
Poland			-0.159	10.3			-0.102	6.47
Ukraine			-0.169	6.96			-0.203	5.06
Russia			-0.137	5.4			-0.168	4.15
Hungary			-0.138	4.68			-0.056	1.51
Other Eastern Europe			-0.108	4.96			-0.078	2.93
U.K.			-0.002	0.18			-0.000	0.03
Other Northern Europe			0.016	0.68			0.050	0.19
Greece			-0.157	6.75			-0.032	0.85
Italy			-0.066	4.08			-0.071	4.36
Portugal			-0.070	4.66			-0.065	3.36
Other Southern Europe			-0.073	4.46			-0.108	5.45
West Africa			-0.120	4.63			-0.046	1.52
East Africa			-0.101	5.91			-0.057	3.23
Algeria			-0.044	1.12			-0.049	1.07
Egypt			-0.037	1.15			-0.087	2.44
Morocco			-0.077	2.28			-0.065	1.84
Other Northern Africa			-0.166	5.00			-0.074	1.85
Southern Africa			0.122	4.19			0.061	2.26
Lebanon			-0.153	5.99			-0.111	3.07
Afghanistan			-0.265	7.10			-0.145	1.14
Iran			-0.145	6.31			-0.203	5.89
Iraq			-0.219	6.81			-0.219	2.80
Other Western Central Asia			-0.108	5.00			-0.097	2.69
China			-0.132	9.16			-0.080	4.35
Hong Kong			-0.016	1.11			-0.014	0.87
South Korea			-0.153	5.66			-0.041	1.07
Taiwan			-0.107	3.90			-0.080	1.99
Other East Asia			-0.052	1.79			-0.161	2.78
Philippines			-0.200	14.8			-0.075	5.55
Vietnam			-0.113	7.42			-0.081	3.52
Other South East Asia			-0.029	1.70			-0.045	1.75
India			-0.189	13.6			-0.113	6.70
Sri Lanka			-0.241	13.8			-0.075	2.16
Pakistan			-0.255	11.0			-0.166	3.98
Bangladesh			-0.461	14.1			-0.268	3.55
Others			-0.070	3.24			0.001	0.02

Table B6: Decomposition of the Immigrant Wage Gap (2006)—OLS

	Private Sector		Public Sector		Difference	
	Gaps	t	Gaps	t	Gaps	t
Males						
Observed wage gap^a	-0.035	17.62	0.031	7.79	-0.066	14.87
Explained gap	0.182	107.93	0.151	65.73	0.031	10.94
Language	0.004	3.00	0.001	1.31	0.003	1.87
Schooling	0.075	89.58	0.095	52.63	-0.020	10.15
Work experience	0.039	65.24	0.014	13.67	0.025	20.95
Others ^b	0.065	76.76	0.041	39.06	0.024	17.46
Unexplained gap	-0.149	23.5	-0.100	8.26	-0.049	3.59
Language	-0.025	1.87	-0.009	0.30	-0.016	0.47
Schooling	-0.217	17.60	0.030	1.15	-0.247	8.52
Work experience	-0.149	16.96	0.087	4.07	-0.236	10.22
Others	0.242	12.00	-0.208	4.74	0.450	9.33
Immigrant specific effects	-0.069	11.72	-0.020	1.81	-0.048	3.78
Citizenship	0.021	12.96	0.027	5.37	-0.007	1.23
Country of birth fixed effect	0.016	8.94	0.024	5.03	-0.008	1.56
Foreign schooling	-0.021	3.93	-0.015	1.67	-0.006	0.59
Foreign work experience	-0.085	29.28	-0.057	12.76	-0.028	5.17
Females						
Observed wage gap^a	-0.005	2.14	0.006	2.19	-0.011	3.04
Explained gap	0.145	62.79	0.120	66.58	0.025	8.57
Language	0.006	2.82	-0.005	6.48	0.011	4.88
Schooling	0.043	42.22	0.051	32.44	-0.008	4.17
Work experience	0.039	59.62	0.026	34.06	0.013	12.75
Others ^b	0.058	62.71	0.048	55.09	0.010	7.52
Unexplained gap	-0.035	5.02	-0.050	5.56	0.014	1.25
Language	-0.043	2.87	-0.002	0.10	-0.041	1.66
Schooling	-0.270	19.27	-0.233	10.8	-0.037	1.44
Work experience	-0.104	11.33	0.014	0.97	-0.118	6.87
Others	0.382	16.52	0.171	5.35	0.211	5.34
Immigrant specific effects	-0.114	17.78	-0.064	7.54	-0.050	4.72
Citizenship	0.020	10.94	0.021	5.89	-0.001	0.27
Country of birth fixed effect	0.008	3.56	0.021	4.85	-0.013	2.71
Foreign schooling	-0.065	11.66	-0.067	10.43	0.002	0.25
Foreign work experience	-0.076	25.57	-0.038	11.02	-0.038	8.30

^aDifference between the *log of weekly earnings* of immigrants and that of Canadian born individuals, which (once multiplied by 100) can be interpreted as approximate percentage differences in weekly earnings.

^bThe category *Others* include the *Region of residence*, *Urban area*, *Married* and the *Constant term* variables.

Source: Calculations from Statistics Canada 2006 census data.