

Foreign Human Capital and The Earnings Gap Between Immigrants and Canadian-born Workers*

Working Paper

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Abstract

We use the new information available in the 2006 Canadian census regarding the location where the highest degree of education was attained to better estimate Canadian and foreign human capital (education and work experience). The identification of the human capital source explains up to 70% of the immigrant/native wage gap. We find that education acquired in Asia tends to be valued less than education from South America, Africa and East Europe; which in turn is less valued than education from Oceania, the U.S. and the rest of Europe. The native/immigrant wage gap is highly heterogenous across countries or regions of birth. The separation of the source of human capital visibly reduce the country fixed effects coefficients. The reduction is sizeable for China, Pakistan, India, Philippines, West and Central Asia and the rest of Asia. Some fields of study are considerably more tradable than others. “Health Assistance”, “Computer Sciences, Mathematics, Physical Sciences and Sciences Technologies” and “Humanities and Visual and Performing Arts ” are the most tradable fields to Canada. “Social and Behavioral Sciences and Law”, “Business, Finance and Marketing” and “Education” are the least tradable.

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1 Introduction

Immigrants have not fared well in the Canadian labour market lately. A number of studies have documented a steady decline in their earnings relative to the Canadian born over the last three decades. They have found that immigrants who arrived in Canada in the 1990s earned around 30 percent less than Canadian-born workers (see for instance Green and Worswick (2004) and Aydemir and Skuterud (2005)). By contrast, earlier cohorts of immigrants who arrived in the 1970s were earning about the same as Canadian-born workers. Starting with Chiswick (1978), studies have suggested that the lack of transferability of human capital is a key reason why immigrants tend to earn less than natives. While most immigrants in the 1960s were from countries culturally close to Canada (Western Europe and the United States), about two thirds of immigrants who arrived in the 1980s and 1990s were from Asia, Africa, and Central and South America. Given the large and increasing fraction of foreign-born population in Canada (currently around 20%), the appropriate assimilation of recent immigrants into the Canadian labor market has become a priority.¹

We investigate how much of the earnings gap between immigrants and the Canadian born derives from the lower valuation the labour market assigns to foreign human capital (education and work experience) in comparison to Canadian human capital. Our research exploits a direct measure of the location where the highest degree was obtained based on a new question of the 2006 Canadian Census. This new information goes a long way towards identifying how much of an immigrant's education was obtained in the home country and how much was obtained in Canada.² We use the census to estimate earnings penalties to immigrants linked to the country or region where they acquired their education controlling for gender, academic degree, work experience, metropolitan area of residence and mother tongue (English or French only). We go further and examine for which of the immigrants' main countries/regions of birth does the inclusion of the human capital origin substantially explain the earnings gap.

The identification of the human capital source explains up to 70% of the immigrant/native wage gap. Education acquired in Asia tends to be valued less than education from South America, Africa and East Europe; which in turn is less valued than education from Oceania, the U.S. and the rest of continental Europe. Studying in the UK appears more beneficial than studying in Canada.

The native/immigrant wage gap is highly heterogenous across countries or regions of birth. Immigrants from Asia (with the exception of South-East Asia and Hong Kong) tend to have larger wage gaps than immigrants from Europe. The improvements in our human capital estimations (and location of study) visibly reduce the country fixed effects coefficients. The reduction is sizeable for China, Pakistan, India, Philippines, West and Central Asia and the rest of Asia.

Some fields of study are considerably more tradable than others. "Health Assistance" is a trad-

¹The proportion of foreign-born fluctuated between 15% and 16% from 1961 to 1991. The fraction rose to 18.4% in 2001 and 19.8% in 2006

²This information, in turn, helps distinguish work experience acquired abroad from work experience acquired in Canada.

able field for almost all locations of study. To some extent the same holds true for “Computer Sciences, Mathematics, Physical Sciences and Sciences Technologies” and “Humanities and Visual and Performing Arts”. The fields that experience the highest negative wage penalties if studied abroad (“Social and Behavioral Sciences and Law”, “Business, Finance and Marketing” and “Education”) require country specific knowledge and high communication skills.

The paper proceeds as follows, the second section reviews the literature regarding the returns foreign human capital. The third section describes the census data and summary statistics. The fourth models the foreign wage gap in an earnings equation framework. Empirical findings are reviewed in fifth section and conclusions are presented in last section.

2 Foreign human capital and immigrants earnings gap

The location of study of recent immigrants may account for the growing earnings gap between immigrants and Canadian-born workers if the human capital acquired abroad is not fully transferable into the Canadian labour market. The influential study by Friedberg (2000) uses the 1983 Israeli Census to look at the contribution of the differences in the returns to foreign and native schooling and labour market experience to the immigrant-native wage gap.³ Friedberg also highlights the level of heterogeneity in the returns to foreign schooling by source country. Returns to education abroad are higher for immigrants from Europe and the Western Hemisphere (in comparison to immigrants from Asia and Africa). The paper also suggests that acquiring further education in the host country may increase the overall return to education.

The Canadian literature (Ferrer and Riddell (2008), Ferrer, Green and Riddell (2006) among others) also suggests that years of schooling and experience accumulated before arrival are much less valued than the host country ones.⁴ Ferrer and Riddell study the period from the 1980s to the early 2000s. Their central focus is on the effect of credentials (degrees and diplomas) on the earnings of immigrants, holding constant the number of years of education. Using public-use Census files from 1981 to 2001, they estimate a flexible functional form for wages where education and experience are interacted with an immigrant indicator. They find substantially lower returns to foreign education and experience. Ferrer, Green and Riddell (2006) use a different approach. They incorporate measures of literacy skills in addition to educational levels and separate degrees acquired in the home and host country. They find that, among the university-educated, literacy skills explain about two thirds of earnings difference between immigrants and the Canadian born. This suggests that the quality of foreign education, as measured by literacy skills, is not as high as Canadian education.⁵

³The 1972 Israeli Census is used to argue that the results found using the 1983 Census come from an assimilation process and not a change in cohort quality over time.

⁴Another possibility is that recent immigrants may not have good enough language skills (in English or French) to get some high-paying jobs. Aydemir and Skuterud (2005) find that language skills accounts for a share of the earnings gap between immigrants and the Canadian born.

⁵Recent comparisons between immigrants earnings in Canada and Australia (Clarke and Skuterud (2012) and An-

One challenge when trying to estimate the role of foreign education in the earnings gap between immigrants and Canadian-born workers is that explicit information on the location of study is typically not available in data sets like the Census. Researchers have tried to infer where the education was obtained by comparing the age at which an immigrant should have completed her reported highest degree to the age at immigration.⁶ Indeed, Friedberg estimates years of schooling in the home country under the assumptions that children start schooling at age 7 and, more importantly, that they attend school without interruption. Bratsberg and Ragan Jr (2002) follow a similar strategy using the 1990 U.S. Census to estimate differences in the return to education for immigrants with and without U.S. schooling.⁷ Their main findings are similar to those of Friedberg for Israel.⁸ The procedure, however, may mis-attribute the country where education was acquired. Immigrants may have worked in Canada for a number of years before starting their final degree. For instance, a 40 year old immigrant with a MBA who came to Canada at age 25 may very well have completed that degree in a Canadian university after the age of 25. Likewise, foreign-born individuals may finish their studies in Canada before being officially considered immigrants. In the Canadian Census age at immigration is the age an individual had when he/she first became a permanent resident of Canada. Foreign students who went to university in Canada and became permanent residents after finishing school would, therefore, be misleadingly classified as having a foreign degree using a Friedberg-type imputation procedure.

Fortunately, the long form of the 2006 Canadian Census includes an explicit question about where was the highest degree obtained. The location of study is either recorded as a country, for those who studied abroad, or as a province, for those who studied in Canada.⁹ While the location of study is also available in some smaller data sets, we can perform a much more detailed analysis thanks to the large sample available in the master files of the 2006 Canadian Census (20 percent of the total population). The Census also includes information on field of study, which enables us to see whether some fields of study are more portable (e.g. math and computer science) than others (e.g. education and humanities) regardless of the location of study.¹⁰

tecol, Kuhn and Trejo (2006)) argue that foreign-born assimilation is better in Australia due to the role played by institutions. Clarke and Skuterud (2012) indicate that the Australian system is encouraging high quality applicants to choose it as destination.

⁶For instance, one may assume that an immigrant with a BA degree who came to Canada at age 30 completed her degree abroad prior to immigrating.

⁷They determine an age of graduation based on the reported years of education and the assumption of starting schooling at age at 6. Immigrants arriving at an age lower than the presumed age at graduation (years of completed schooling plus six) are classified as having U.S. schooling.

⁸They find that immigrants with U.S. schooling earn higher wages than immigrants without U.S. schooling. Their results also indicate that returns to foreign schooling are significantly higher for immigrants who completed some of their studies in the United States. Though this last finding is based on a small (351 immigrants) and not representative survey of U.S. immigrants (the National Longitudinal Survey of Youth)

⁹Consider an immigrant with a high school diploma who comes to Canada at age 25 and then completes a two-year community college program. Since one would normally complete such a program at age 20, the imputation procedure would suggest that the immigrant got all of her schooling abroad despite the fact the two-year community college program was actually acquired in Canada. With the new information available we can clearly distinguish both sources of human capital and correspondingly recalculate years of work experience abroad and in Canada.

¹⁰Relatively recent studies (such as Clark and Jaeger (2006) and Hartog and Zorlu (2009)) have also directly identify

3 Data and Descriptive Statistics

3.1 The 2006 Canadian Census

As mentioned above, our primary data comes from the 2006 long form Canadian Census. The Census was conducted by Statistics Canada on residents of private dwellings as of May 16, 2006 (the reference day) between the months of February and August of that year.¹¹ It enumerates Canadian citizens, landed immigrants, and non-permanent residents.¹² One in five households received the long form questionnaire which, in addition to the regular eight questions on household members, age, gender, marital status and mother tongue, contained 53 questions on various topics such as education, immigration, income and employment.

We focus on people between the age of 20 and 64 with an education level higher than high school, and who were full-time workers with positive wage income in 2005.¹³ Regarding immigrants, we further focus on those who were old enough to face problems adapting to their new environment, but who were young enough to invest in education around the time of migration. Therefore, the majority of our analysis uses immigrants who arrived in Canada between the age of 15 and 29. Nevertheless, trying to make our data set more comparable with previous literature we replicate some of our specifications using a sample of immigrants 15 or older at arrival. Non-permanent residents are removed from the sample since they are not comparable to landed immigrants, and are not asked the date of arrival to Canada.¹⁴

Our dependent variable is the logarithm of the average weekly wages. The average is constructed dividing the total wage income in 2005 by the declared number of weeks worked in the year. Since the census does not record weekly hours of work in 2005, we limit our analysis to full-time workers to have a better measure of the hourly price of labor. To minimize the problem of low-wage outliers, we only consider people earning more than half the minimum weekly earnings a full time worker could get (assuming a working week of 30 hours). That is, we restrict the sample to people with an average weekly wage earnings higher than 15 times the province minimum hourly wage rate.¹⁵ Minor

the origin of immigrants education for other countries or for other analysis. For example, Clark and Jaeger (2006) distinguish between immigrants who earned an additional degree in the host country (a GED in particular) and immigrants who did not. They find immigrants with a host country degree earn more than immigrants without one but with similar foreign schooling. Still, their study relates more to sheepskin effect (or signaling) than to the undervaluation of foreign education. Hartog and Zorlu (2009) follow refugees to the Netherlands for their first five years (1995 to 2000) and use the administrative immigration records to measure their education level. Their main finding is that returns to higher education are not significant. Their study, however, limits itself to refugees in their first five years and does not identify their location of study.

¹¹Statistics Canada points out that this was the period of most intense activities on data collection.

¹²According to the Census information, it also counted “*Canadian citizens and landed immigrants who were temporarily outside the country on Census Day; including federal and provincial government employees working outside Canada, Canadian embassy staff posted to other countries, members of the Canadian Forces stationed abroad and all Canadian crew members of merchant vessels*”.

¹³The question on where was the highest degree obtained is only asked to people with more than a high school degree.

¹⁴Non-permanent residents are defined as persons living in Canada who have a Work or Study Permit, or who are claiming refugee status.

¹⁵Appendix A shows the minimum hourly wage by Province valid in 2005.

restrictions are imposed to exclude observations with inconsistencies in key explanatory variables such as unspecified country of origin (“Other”), location of study (“Outside Canada” or “Distance Learning”) or year of immigration (for the foreign born).¹⁶ The list of the restrictions is detailed in Appendix B. Our final sample has about 1.2 million observations with an immigrant share of around 10 percent.

As a first step, we create explanatory variables related to years of experience and years of education. We follow a standard Mincer earnings regression and calculate potential labour market experience as the difference between age and years of education assuming that children start school at age seven. Given that the 2006 census no longer asks for the number of years of schooling, the variable is imputed according to the highest degree or diploma obtained (see Appendix C for the imputation rules).¹⁷ Nonetheless, given that our dataset contains only people with more than a high school diploma, we subtract 12 years out of the total number years of education. This means that a person with a bachelor’s degree would get four years of education (rather than 16).

We further separate work experience in Canada and abroad based on age at immigration. Under the assumption that landed immigrants who finished their studies abroad start working upon arrival, we calculate their work experience in Canada as the difference between their age at the time of the Census and their age at arrival. Foreign-born individuals who finish their studies in Canada are divided into three groups according to their age at arrival and highest degree attained. For those arriving at 18 years old or younger, Canadian work experience is assumed equal to total work experience. For those arriving between the age of 19 and 22, Canadian work experience is calculated as age (in 2006) minus age at arrival minus the imputed years of education in Canada assuming that those with a bachelor’s degree or higher didn’t start their programs until arriving in Canada.¹⁸ Lastly, for those who arrived after age 22 work experience is calculated as age minus age at arrival minus imputed years of education in Canada. In that case, however, we assume that those with a postgraduate degree finished their bachelor’s degree before arriving in Canada. Individuals born in Canada are simply assumed to have obtained all of their work experience in Canada. For immigrants, work experience abroad is computed as the difference between total work experience and work experience in Canada.

The fact that the education section in the 2006 census simply records the highest degree or diploma achieved, offers the possibility to include a dummy variable for each education level in the wage regressions. We simplify the empirical model by grouping the educational degrees into

¹⁶The Research Data Center data release policy prevents us from currently disclosing the number of observations dropped with each restriction. However, the total number of observations eliminated are smaller than 5% of the final sample.

¹⁷In the 1981 to 2001 censuses more detailed questions were asked about years of education. They provided more information about the educational achievement of individuals without a high school diploma (e.g. 8 vs. 11 years of education). The 2006 Census only records whether or not one completed a high school (or higher) diploma. Fortunately, this is of limited consequence for our analysis that only focuses on workers with more than a high school diploma.

¹⁸This implicitly assumes that there are no transfer mid-program.

four categories: trade certificate, college or university diploma below a bachelor’s degree, bachelor’s degree and post-graduate degree. We use “trade certificate” as the base category in all estimations. The advantage of this approach, relative to one based on years of education, is that non-linearities in the return to education are directly captured by the set of dummy variables. To identify differences in the return to education obtained in Canada and abroad, the education dummies are interacted with the foreign education indicator (yielding six binary variables: three for education attainment in general and three interaction terms).¹⁹ For instance, if a person got a bachelor’s degree outside Canada we would observe the separate effects of having a bachelor’s degree in general and obtaining a bachelor’s degree abroad.

Moreover, following Friedberg, we divide years of education in Canada and years of education abroad. We, however, add an additional distinction. We distinguish between years of education above high school and years of education above a bachelor’s degree. Thus, we end up with four variables: years of education above high school in Canada, years of education above high school abroad, years of education above a bachelor’s degree in Canada and years of education above a bachelor’s degree abroad. In principle, a foreign-born who finishes a master’s degree in Canada has only one (or two) year(s) of education outside her country. In our specification there is a limit of four years of education above high school (which is approximately the time needed to finish a bachelor’s degree) and five years of education above bachelor’s degree (considering a doctoral degree as the highest education possible). People with bachelor’s education and higher are inputted with the maximum years of education above high school. In the case of the foreign-born with a master’s degree in Canada we would input four years of education above high school abroad and two years of education above bachelor’s in Canada.²⁰

Country of birth and the country where the highest diploma was obtained (location of study) are grouped in 22 and 19 categories, respectively. We identify the top ten countries where immigrants get their education from (including Canada) and group the rest in broad geographic areas (such as “South America”, “East Europe”, “Africa”, etc.). The first ten countries provided education to more than 80% of all immigrants. Similarly, we find the top ten countries of origin and combine the rest in relatively homogenous geographic areas. Nevertheless, to avoid location of study dummies becoming proxies for country of origin effects we make the classification of countries of origin as detailed as the classification for the locations of study. Thus, we include two more country of origin dummies for Pakistan and Romania.²¹ With Canada also in the country of origin list, we have thirteen countries (the original top ten plus Canada, Pakistan and Romania) and nine regions (Appendix D shows the details).

Additionally, the 2006 census has detailed information about the field of study of the highest postsecondary degree.²² The original data is coded using the Classification of Instructional Pro-

¹⁹We disregard the interaction of foreign degree and trade certificate.

²⁰The common procedure would have allocated two years of Canadian education and 16 years of foreign education.

²¹These two countries are in the top 15 countries of origin.

²²The dictionary in the public use files describes this variable as “the predominant discipline or area of learning or

grams (CIP Canada 2000). We combine several subsections across broad CIP categories trying to form more homogenous groups. Appendix E shows our definition of eleven major fields of study. With the new classification we explore to what extent the field of study affects the transferability of foreign diplomas to the Canadian Labour market. For example, while diplomas in education may be valued differently depending on the country of origin, diplomas in mathematics-related fields are arguably less influenced by cultural and linguistic factors and might be more portable.

3.2 Descriptive Statistics

Table 1 shows the distribution of immigrants by country/area of origin and year of arrival. The top ten countries account for 51% of all immigrants in our sample. With the exception of the United Kingdom, all of the top five countries of origin are located in Asia. Given the age restrictions in our sample the earliest year of arrival is 1956.

One can see that the distribution of source countries has changed dramatically throughout the years. Most of the immigrants who arrived between 1956 and 1970 were from the UK and continental Europe (21.9% from UK, 2.4% from France, 1.2% from Poland, 7.7% from East Europe and 25.9% from the rest of the continent), whereas the majority of immigrants who arrived after 1990 are from Asia.²³ Just India, Philippines, China, Hong Kong and Vietnam made up 37% and 39% of all immigrants who arrived between 1991 and 2000, and after 2000, respectively.

Close to 56% of immigrants received their highest diploma in Canada (see table 2). Not surprisingly, immigrants who spent more time in the country are more likely to have a Canadian diploma. More than 62% of all immigrants who arrived before 1990 obtained their highest diploma in Canada, but the number goes down as the year of arrival nears (55% for immigrants who arrived between 1990 and 2000, and 26% for immigrants who arrived after 2000).²⁴

The majority of the foreign-born who did not acquire their highest degree in Canada got it in their home country instead. Accordingly, the distribution of the location of study for countries other than Canada closely mirrors the distribution of country of origin of immigrants.

Considering all year, the total share of immigrants who got their highest degree in countries other than Canada ranges from 0.7% to 5.8% (see table 2). The U.K. and Europe are the most important locations of study for immigrants who arrived between 1956 and 1970 (around 23% of those immigrant got their highest education there), but their relevance diminishes after 1980. India, Philippines and China increase their positions after 1991, reaching 30% for immigrants who arrived after 2000.

Regarding the distribution of natives and immigrants by field of study, we see that foreign-born are relatively under-represented in fields that require higher levels of communication abilities, such as education and social sciences (see 3). Either the heterogeneity of transferability of degrees or

training of a person's highest postsecondary degree, certificate or diploma".

²³Asia represents the source of 52% and 51% of all arrivals between 1991 and 2000, and after 2000, respectively.

²⁴These figures suggest that a share of immigrants acquire additional education years after their arrival to Canada.

the Canadian immigration policy may be affecting the field of study distribution of newcomers.²⁵ Conversely, immigrants are over-represented in fields that require more quantitative skills, such as mathematics, computer and physical sciences, architecture and engineering.

Consistent with other Census-based studies, we find a strong clustering of immigrants in large census metropolitan areas (CMAs), and in particular Toronto, Vancouver and Montreal (see table 4). 66% percent of immigrants live in these three cities, compared to only 30% of natives. The twenty largest CMAs listed in the table account for over 90% of immigrants, but only about 60% of natives.

The age distribution of immigrants and natives reported in table 5 show some important demographic differences between the two groups. Immigrants in our sample are generally older than natives. There is a higher fraction of immigrants age 50 to 64 (30% versus 23% of natives), and a smaller fraction for the age 20 to 29 (12% versus 20% of natives). Immigrants are also more educated than natives. In table 6 we group the eleven levels of education from the Census into seven categories and impute the number of years one would normally take to complete the corresponding diplomas. Relative to natives, immigrants are less likely to have some vocational education or a community college/CEGEP diploma (45% compared to 60% for natives), and more likely to have a diploma above bachelor's degree (17% for immigrants compared to 11% for natives).

Naturally, pursuing a diploma in Canada depends heavily on the age at arrival. Immigrants who arrive at a relatively young age are inclined to obtain a Canadian degree, while immigrants who arrive at an older age are more likely to have their highest degree in their home countries (see table 8). Of the people who arrived at age 19, only 8.4% obtained their highest degree abroad, compared to the 71% for immigrants who arrived at age 29. Given that we only analyze people with more than a high school degree, all immigrants who arrived between the age of 15 and 19 obtained their highest diploma in Canada.

Table 8 illustrates how the direct question on location of study helps us identify where did immigrants acquire their human capital. Only a few immigrants have diplomas that one cannot be completed before the age of 25 (people with a PhD or an MD are such cases). Hence, very few immigrants age 25 and over would be imputed some Canadian education using a Friedberg-type imputation approach. By contrast, we show that around 40 percent of immigrants who came at age 25 or 26 have a Canadian diploma. This fraction remains substantial (about 30 percent) even for immigrants who came to Canada at age 29. The table depicts a relatively smooth decline in the share of immigrants with a Canadian degree as a function of age at immigration. By contrast, imputation procedures that have been used in the past would have generated a much sharper drop in the share of immigrants with a Canadian degree as the age of arrival increases.²⁶

²⁵Chiswick and Miller (2007) study suggests that immigrants with language mismatches tend to be penalized by the labour market. While immigrants who match the language requirements have better possibilities of moving to jobs that suit better their skills.

²⁶For instance, under the assumption that people start their education at age seven and continue without interruption, everyone should complete a Bachelor's degree by age 23. Immigrants who currently hold a bachelor's degree but

The summary statistics of the main variables are reported in table 9. The mean of log weekly wages for natives is only slightly larger than the mean for immigrants (0.04 difference in logs, i.e. a 4 percent difference). That said, the means reported in the table also confirm the earlier evidence that immigrants are both older (average age of 42.37 versus 40.37) and more educated (15.14 against 14.68) than natives. Since earnings increase in both age and education, controlling for these factors in the earning regression should make the 4 percent earnings gap larger. Lastly, immigrants work as many weeks per year as natives (around 47) and have a larger total work experience (21.23 versus 19.7), though understandably a smaller Canadian work experience (17.26 versus 19.7).

4 Empirical strategy

We estimate the logarithm of weekly wages on a foreign-born dummy, a set of demographics and human capital variables (gender, education and work experience) and a set of location of study dummies. The focus is on the magnitude of the foreign-born dummy as it would indicate how much of the immigrant/native gap we are not able to explain. An initial specification restricts the regression coefficients (except the constant) to be the same for immigrants and the Canadian born. Consider a standard (log) earnings equation for immigrants

$$w_i = \alpha_I + X_i\beta_I + \mu_i$$

and for Canadian-born workers

$$w_i = \alpha_C + X_i\beta_C + \mu_i$$

where w_i is the logarithm of weekly wage, X_i is a vector of covariates (including work experience and education), and μ_i is an error term that satisfies the usual orthogonality assumption ($E(\mu_i|X_i) = 0$). The equation would condition the effect of the covariates on earnings to be the same for immigrants and natives.

$$w_i = \alpha_C + \alpha_I I_i + X_i\beta + \mu_i \tag{1}$$

The mean earnings gap ($\bar{w}_C - \bar{w}_I$) would come from the difference in the average value of covariates ($(\bar{X}_C - \bar{X}_I)\beta$) and the specific constant for immigrants ($-\alpha_I$), where I_i is a dichotomous variable indicating whether person i is an immigrant. The sign, size and significance of α_I relates to the unexplained part of the earnings gap; and our different specifications would show how much of the wage gap we are able to disentangle.

This first specification is, however, restrictive. We make efforts to distinguish education and experience acquired in Canada from education and experience obtained abroad. Still the focus remains on the foreign born dummy, and how much can we explain of it with the direct information regarding the location of study.

arrived before the age of 23 would all be imputed a Canadian diploma, while immigrants who arrived after the age of 23 would all be imputed a foreign degree.

$$w_i = \alpha_C + \alpha_I I_i + X_i \beta_C (1 - D_i) + X_i \beta_I D_i + \mu_i \quad (2)$$

Where D_i is an indicator of where the human capital was acquired. One if it was acquired out of Canada and zero otherwise. In some specifications we decompose the immigrant indicator I_i into several dummies according to the immigrants' age at arrival (15 to 19, 20 to 24 and 25 to 29 years old).

We go further and break up the foreign born indicator into several country/area of origin dummies. In this way each country/area of origin fixed effect becomes an unexplained wage gap between immigrant from that country and natives. Additionally, we incorporate controls for language skills (two dummies for English and French as mother tongues), metropolitan area of residence (being Toronto the omitted CMA) and province of residence (making Ontario the base case). The equation can be generalized to:

$$w_{ilas} = \alpha_C + \psi_s + X_i \beta_C (1 - D_i) + X_i \beta_I D_i + \eta_l + \lambda_a + \mu_{ilas} \quad (3)$$

Where the additional indexes specify the effect of knowledge of official languages (η_l) and residence in a particular province and city (λ_a). ψ_s represents the country/area of origin fixed effect and D_i remains the indicator of where human capital was acquired. Lastly, a set of regressions include the field of study of immigrants and interactions between with the location of study. These interactions enable the comparison of wage premiums between specializing in a field in a particular foreign country versus doing it in Canada; and the evaluation if the difference depends on the field of study.

5 Findings

5.1 Base Specifications

Our initial estimations identify the native/immigrant wage gap at around 11%. Through the different specifications the coefficient of the foreign-born dummy experiences a reduction between 30% to 50% (see tables 10,11,12 and 13). The reductions are associated with the incorporation of location of study fixed effects or the separation of the human capital acquired in Canada from the one obtained abroad.²⁷ The statistical significance of the results will not be mentioned regularly. Given the large number of observations the vast majority of our results are statistically significant at 1%.

Immigrants arriving at a younger age appear to have less problems integrating into the Canadian labour market. Columns five and six of table 10 show that foreign-born arriving at ages between 15

²⁷For both measures the new information available in the Census is paramount, as it improves the identification of the source of human capital.

to 19 have the smallest a wage gap (of about 2.6%). In comparison, the wage gap for people arriving at ages between 20 to 24 is 8%, and for people arriving at ages 25 to 29 is 19%. The inclusion of location of study fixed effects have a higher impact on the wage gap of immigrants who arrive at an older age, reducing their wage gap between 34% to 39%. The effect on the wage gap of people arriving at 19 or younger is negligible.

Using the coefficients of the location of study dummies we graph the average negative effects of obtaining an educational degree from a particular country in comparison to Canada (the base category). Figures 1 and 2 show that Pakistan is the most penalize location of study. India, China and the rest of Asia (South East Asia, Western and Central Asia and the rest) follow suit as less advantageous places to study. Studying in the U.S., Oceania and the rest of Europe (basically, continental Western Europe) appears to be considered as good as studying in Canada; while studying in the U.K. has, in fact, a positive premium payoff. This pattern is consistently depicted by all the even columns of table 10.²⁸

Tables 11 and 12 show the largest decrease in the immigrant/native wage gap (from around -12% to around -3%).²⁹ They present different ways to incorporate education into the earnings equation (years above a high school and bachelor vs degree achieved), but for both the highest reductions in the immigrant dummy coefficient come from the separation of foreign and Canadian human capital (columns three, five and seven in both tables). We see this as evidence of the better classification we are able to achieve. Location of study fixed effects are included in all even columns, however their incorporation starts losing impact by column six. By then, the human capital separation is already included in the specifications.

The different returns between foreign and Canadian human capital are clearly shown in table 12; where work experience is separated according to its origin (foreign or native) and education abroad is specified as an additional effect on the achieved degree. Foreign human capital is valued less than Canadian human capital. The major difference in the returns to education happens at the bachelor and graduate level. Those with a foreign bachelor degree or higher have between 6% to 15% less income than people who finish a similar degree in Canada. The difference is relatively minor for people with university certificate below bachelor's level (between 3% to 6%).³⁰ The most straightforward explanation is that occupations that do not require higher levels of education tend to involve lower levels of communication skills and a higher component of manual skills, which are quite comparable across countries. In many specifications (of both tables 11 and 12) , people with an above bachelor's education abroad have a smaller immigrant/native wage gap than those with a foreign bachelor's degree. Again, it could be argued that occupations for very specialized workers

²⁸Even though the number of years after arrival is incorporated in the work experience variable, we can not completely rule out the possibility of a discontinuity in the immigration assimilation process for immigrants arriving before the 1970s as much of UK immigrants did.

²⁹Note that the first two columns of both tables come from table 10.

³⁰The difference for people with trade certificates is negligible. We do not incorporate the interactions in this version, but our key results remain under all specifications.

are homogenous across countries; hence the penalty from foreign education would be smaller.³¹ Regarding work experience, we see that years abroad are heavily discounted. At best, the first order difference (without considering the square term) between Canadian and foreign years of experience is seven to one (columns six and eight); at worst, thirty-five to one (column seven); with coefficients of foreign experience very close to zero.³²

Interactions between the highest degree achieved and the last location of study are presented in table 13. Given the pattern found in figures 1 and 2 we decide to group location of study into broader areas, namely: Canada; the West (including Oceania); East Europe (including Romania and Poland); China and West and Central Asia (including Hong Kong); India, Pakistan and the rest of Asia; the rest of America; South-East Asia (including the Philippines) and Africa. A more manageable number of locations facilitates the interpretation of the results without sacrificing much of the identification of location specific premiums. Country/area of origin fixed effects are added as extra controls in the last two columns (in addition to CMA and province fixed effects) but the main finding of the table remains. Recognition of educational achievements is highly related to the last location of study. Overall, education in Asia has the highest negative premiums. Regarding education levels, Bachelor's and above bachelor's degrees tend to have the largest negative coefficients, but they vary substantially by location of study. The contrast is greater between the old areas of origin (the West) and the new sources of immigrants (China and West and Central Asia; India, Pakistan and the rest of Asia; and South-East Asia). While a bachelor degree obtained in any of the new areas of origin would create a negative wage gap of about 33% to 22% for the newcomer, a bachelor degree obtained in the West would only have a negative wage gap of about 2%.³³

5.2 Including older arriving immigrants

Trying to make our data more comparable with the ones used by the literature we expand the sample to include immigrants arriving at an age older than 29. That is, we consider all immigrants arriving at age 15 or older.³⁴ The replication of tables 10 to 12 gives us relatively similar but interesting findings. The inclusion of location of study fixed effects markedly reduces the foreign-born dummy coefficient. The comparison of columns one and three against two and four in table 14 (the replication of table 10) shows that the size of the immigrant coefficient decreases in more than half. The initial magnitude of the unexplained wage gap is, however, twice as large as previously found. Columns five and six shed some light on the factors behind the wage gap increase.

³¹The possibility that immigrants with a graduate education abroad could be more likely to arrive with an arranged employment can not be disregarded. Information on arranged employment before arriving is not available in the census.

³²Given that the average foreign years of experience in the sample is less than four years, it is reasonable to consider only the linear term for comparison.

³³The interaction of educational degrees with the detailed list of locations of study shows that immigrants who studied in the UK had a positive and statistically significant effect on the wage gap, while those who studied in Pakistan or India had the highest negative impact. Particularly for Bachelor's and above bachelor's degrees.

³⁴Friedberg makes a similar argument when explaining the selection criteria for her sample.

Immigrant/native wage gap for immigrants arriving at an age older than 29 is considerably larger. The foreign-born dummy coefficients for those arriving between 15 and 19, 20 and 24, and 25 and 29 remain quite similar to the previously found (compare columns five and six of tables 10 and 14); in a range between -0.03 and -0.18. However, the coefficient jumps to a range of -0.31 to -0.42 for those arriving in their thirties. It jumps again to a range of -0.53 to -0.61 for those arriving in their forties and it is -0.64 for those arriving at 50 or older. That is, immigrants arriving at 50 or older earned around 47% less than Canadians of the same age-cohort (and with similar characteristics).³⁵

Moreover, the incorporation of the location of study dummies loses effect on the age at immigration coefficients as the age at arrival increases. While the reduction in the coefficient is relatively similar to the one in table 10 for immigrants arriving between the ages of 25 and 29 (about 42%), the reduction for those arriving between 40 and 44 is 25% and around 21% for those arriving at 50 or older.

The results of tables 15 and 16 confirm that, just as in tables 11 and 12, the identification of foreign human capital explains a significant part of initial immigrant/native wage gap. Adding location of study dummies in the first specifications (columns one and three) reduces the foreign-born coefficient between a half a quarter (58% to 27% depending on the specification). Moreover, the separation of education and work experience by source (Canadian vs. foreign) pushes the unexplain wage gap to less than 3% (from -0.24/-0.23 to around -0.01/-0.02, see columns one and seven in each table).

5.3 Immigrant wage gap by gender

The comparison of the wage gap by gender (tables 17 to 20) shows that female immigrants tend to face a smaller penalty than males (-9% to -10% and -13% to -12%, respectively). The inclusion of location of study dummies in the simplest specification (column two in all the tables) also causes a larger reduction on the foreign-born dummy coefficient for women (between 72% and 78% versus less than 30% for men).

The highest reduction in the unexplain wage gap, though, comes from the separation of education and work experience by origin. The separation explains about half of the initial wage gap for men but nearly all of it for women. The foreign-born coefficient in column seven (of both tables 17 and 18) goes down more than 90% and becomes not statistically different from zero.

A last noticeable gender difference relates to the return to education. The overall return to foreign education (in comparison to a “trade certificate” education level) is higher for immigrant women than for immigrant men. For example, the return to a bachelor’s degree abroad for women is around 48% (using the coefficients for bachelor’s degree and foreign bachelor’s degree in column seven of table 18) while for men is 37% (column seven of table 20).³⁶ In comparison to its own gender,

³⁵The proper interpretation of the effect of a dummy on the percentage change of a continuous log-transform variable is $100 * [e^{coefficient} - 1]$. For small values, the size of the coefficient approximates the percentage change in the dependant variable.

³⁶The higher return to foreign education can also be seen in columns 5 to 8 of tables 17 and 19.

nevertheless, women face a larger difference in the returns to education. The wage penalty for having a foreign bachelor's degree instead of a Canadian one is about 16.6% for women (transforming the coefficient -0.1810 into percentage changes in wage) while only 5.5% for men. That is, women's foreign education is discounted at a higher rate than men's.

5.4 Separating the foreign born wage gap by country of origin

The foreign-born dummy in tables 10 to 12 represents the average wage gap between Canadians and immigrants. Heterogeneity on the country of origin effect could, however, be present. Given that the leading source countries to Canada have changed significantly over the last five decades a clear identification of the country/area of birth effect is required. By including country/area of origin fixed effects instead of the general foreign-born dummy, we find considerable heterogeneity the wage premiums across geographical areas.

Figures 3 and 4 graph the country/area negative wage premium recovered from columns 1 to 6 of table 21 (a replication of table 10 adding cma/province fixed effects and dummies for English and French mother tongue). Immigrants from Asia (not counting South-East Asia or Hong Kong) tend to have the largest negative premiums; and out of them, workers from Pakistan consistently get the lowest coefficient (-0.35). The next group includes immigrants from South and Central America, Africa and East Europe with coefficients ranging from -0.2 to -0.1. Natives from the US, France, Oceania, South-East Asia, Hong Kong and the rest of Europe have coefficients around -0.10. British immigrants are the only group with a positive wage premium. The United Kingdom coefficient is significant and close to 0.04.

The inclusion of dummies for groups of location of study in columns two, four and six markedly reduces the size of most country coefficients and the overall divergence (see figure 4). In particular, the coefficients of East European countries (including Romania and Poland) and the South-East Asia region are driven close to zero, while the weighted average of the country/area coefficients goes down from -0.15 to -0.10 (columns one and two).³⁷

Following our previous specifications, tables 23 and 24 separate Canadian and foreign work experience and education. Throughout their columns the size of the country dummies decreases. The identification of foreign education and work experience is particularly important to explain the negative premium of Asian countries. The comparison of columns 1 and 5 of tables 23 and 24 (see figures 5 and 6), shows a reduction in the coefficients of most countries; but the reduction is sizeable for China, Pakistan, India, Philippines, West and Central Asia and the rest of Asia (East Europe, Romania, France and Africa as well). Overall, the country coefficients drop from a range between

³⁷The weights come from the first column of table 1 and refer to the share of immigrants across countries (or areas) in our sample. To test that the incorporation of country/area of origin fixed effect instead of a foreign-born dummy still captures the average negative premium of immigrants and does not affect the coefficients of other variables, we replicate the first four columns of table 10 changing only the foreign-born dummy. Table 22 presents the results. The changes in the coefficients of education, work experience and gender variables are fairly minor. Moreover, the weighted average of the country/area of birth dummy coefficients is quite similar to the foreign-born dummy coefficient of table 10.

0.04 and -0.35 to (in column 1 of table 24) to a range between 0.06 to -0.23 (in column 5). Smaller reductions for Oceania, South-East Asia, Europe (as a whole) and the US drive their coefficients close to zero. Still, the addition of groups of location of study dummies reduces the divergence of the country coefficients and their negatives values regardless of the specification (see columns 2, 4 and 6 on figures 5 and 6). By the end, we are able to significantly explain the wage penalty for immigrants from the European region (including the UK) - and to a large extent - Oceania, South-East Asia, the US and Hong Kong.³⁸

Adding country of origin fixed effects does not change the coefficients of education and work experience markedly. We confirm that the Canadian labour market assigns a lower valuation to both types of foreign human capital. For instance, one year of work experience abroad gives at most 1% increase on wage income; compare to around 5% increase per year of work in Canada (again, considering only the linear terms).³⁹ Also, for any level of education, the penalty for obtaining it abroad varies from -3% to -13% (based on table 24).

Given that most of foreign-born who arrive an early age obtain their highest education in Canada, as a robustness check we restrict the sample to immigrants landing between the age of 20 to 29. We find that although the initial immigrant/native wage gap is higher and the dispersion of country coefficients is bigger (column 1 of table 25), we are able to explain about the same proportion of it (around 50%). The weighted average of the country coefficients goes from -0.1740 to -0.0793; and the distribution of each country effect, drawn in figure 7, is indistinguishable to the previous figure.

5.5 Friedberg's Approach

In order to highlight the difference between our imputations of foreign education and work experience from the ones commonly employed by the literature, we replicate tables 24 and 25 using an imputation method á la Friedberg.

For this, we need to create a variable indicating where we suppose the highest degree of education was acquired. Canadians are assumed to have no years of education abroad and immigrants are considered to have a Canadian degree only if their age at arrival minus six is equal or less than their calculated years of education.⁴⁰ Work experience variables also need to change. Canadians are given zero work experience abroad, and immigrants are assigned foreign work experience only if, under the new calculations, they would have finished their studies before coming to Canada; that is, if they have no Canadian degree. For them the foreign work experience would be the difference between their age at immigration and the assumed age at which they finish their studies (years of education plus six). Given the methodology then, no foreign-born could have both foreign work

³⁸For the first group of countries the absolute value of the fixed effects coefficients is lower than 0.05. For the second group the absolute values is lower than 0.065.

³⁹The average foreign years of experience in the sample is less than four years, so the linear term is the most relevant.

⁴⁰The number of years of education is imputed according to the categories in table 6. In the case where a Canadian degree is assumed for a foreign-born, years of education abroad would be calculated as the age at arrival minus six and years of education in Canada would make up the difference to the total.

experience and Canadian education. Lastly, immigrants are assumed to have gotten all of their foreign education in their home countries. We forgo the possibility of immigrants leaving their home-country to study. Figure 10 compares the calculated share of immigrants with a Canadian degree under these rules with the direct information provided by the census (and presented in table 8) and tables 26 and 27 present the replication results.

The commonly used methodology markedly underestimates the share of immigrants with a Canadian degree, particularly for immigrants arriving at an age over 23 (see figure 10). Correspondingly, when incorporating dummies for groups of location of study and separate the human capital factors by their origin, the wage penalty for holding a foreign degree turns somewhat smaller than in our initial estimations. For instance, for people with a foreign bachelor's or above bachelor's degree, the direct measures points to a wage penalty between 8% to 9% whereas the estimations with the inferred variables indicate a penalty of around 7% (there is no noticeable difference regarding the returns to Canadian degrees). There is also a difference regarding the returns to foreign work-experience. Our estimations show a small return to an extra year of work abroad of about 1%. The estimated return using the inferred variables is almost zero. Given that immigrant have an average of 4 years of work abroad, the difference widens.

Though the weighted average of the country/area coefficients follows the same decreasing pattern, reaching less than half of its value by the last specification, the coefficients precision differ. Our estimates, using the direct information on location of study, have lower standard deviations. This is evident when dummies for groups of location of study are included and the sample is restricted to immigrants arriving between 20 and 29 years old. For them, the old methodology has the biggest problems assigning the source of human capital. Consequently, the effect on the wage income is picked up by the country/area dummy. This imprecision could affect the estimates of the interacting effects of two or more variables; for example location of study and field of study.

5.6 Identifying the field of study effect

We explore the heterogenous wage premiums related to fields of study in tables 28 and 29, and evaluate if they depend on the country where the education was acquired. After controlling for foreign and Canadian education and work experience (as well as gender, mother tongue and province and city of residence) and using "Humanities and Visual and Performing Arts" as the base category, we find that the most rewarded fields of study involve either high levels of education and advanced knowledge of mathematics or require technical skills and have a higher labor demand.

"Architectures, Engineering and Engineering Technicians" and "Construction trade, Mechanics and Woodwork" stand out as the two fields of study with the highest payoff (see table 28 and the corresponding figure 11). The first one has a high level of specialization while the second one relates to manual skills and trades. The next three highest paying fields, in descending order, are "Business, Finance and Marketing", "Health Technicians" and "Computer Sciences, Mathematics, Physical Sciences and Sciences Technologies". The lowest wage premiums relate to the fields of

“Education” and “Social and Behavioral Sciences and Law”

The last two columns of table 29 interact the location of study groups with the field of study categories. The general wage premiums for location of study are analyzed in columns three and four, and shown in figure 12. Consistent with previous results, studying in the west, which includes the U.S., U.K., Oceania and west Europe, does not create a structural lower wage than studying in Canada. No other region has this comparability. The coefficients of the rest of the regions are negative and significant. Studying in “South-East Asia” and “India, Pakistan and Rest of Asia” give the highest negative wage premiums.

Regarding the interactions, we find considerable dispersion in the returns to field of study depending on where the education was acquired. For example, studying “Business, Finance and Marketing” has a slightly positive wage premium if done in the “West”, whereas it gives a highly negative wage premium if done in “East Europe”, “India, Pakistan and Rest of Asia” or “South-East Asia” (figures 13 and 14 present coefficients of the interactions for column five). Still, there are some visible patterns. Regardless of the field of study, education in the “West” is comparable to education in Canada. Some fields even enjoy a positive wage premium (“Health Practitioners”, “Computer Sciences, Mathematics, Physical Sciences and Sciences Technologies” and “Business, Finance and Marketing”).⁴¹ In contrast, the interaction coefficients for East Europe and the three regions of Asia are almost all visibly different from zero.

We also find that “Health Assistance” is a, comparatively, tradable field across regions. With the exception of people studying in “East Europe”, health technicians immigrants do not suffer additional wage reductions. To some extent we observe the same pattern for “Computer Sciences, Mathematics, Physical Sciences and Sciences Technologies” and “Humanities and Visual and Performing Arts”. Most immigrants experience none or minor negative wage premiums, suggesting that education in these fields is relatively tradable. Immigrants who finish their education in “India, Pakistan and Rest of Asia” or “South-East Asia”, however, do suffer additional wage reductions for specializing in computer or physical sciences.^{42 43}

The fields of study with the highest negative wage premiums are common to most of the regions (except the West): “Social and Behavioral Sciences and Law”, “Business, Finance and Marketing” and “Education”. These are fields who require country specific knowledge and high communication skills, which foreign-born workers might not possess.

⁴¹To a lesser extent, and due to larger standard errors, the same is true for some fields studied in Africa.

⁴²People who study in “India, Pakistan and Rest of Asia” are the only ones who face additional wage discounts for specializing in humanities.

⁴³Curiously, foreign architects and engineers do experience a negative wage premium.

6 Conclusions

This study tries to better explain the earnings gap between immigrants and Canadian workers. It uses a direct question, available in the 2006 Canadian census, regarding the location where the highest degree of education was attained. The new information improves estimates of Canadian and foreign human capital (education and work experience), calculated before by assumptions on the education level by age and the age of immigrants at arrival.

The refined identification of the human capital source explains up to 70% of the initial immigrant/native wage gap. The separation of both the education and work experience into native and foreign sources are deciding factors in the reduction of the wage gap from around 11%-12% to close to 3%.

The Canadian labor market gives a negative wage premium to education and work experience acquired abroad. The incorporation of location of study fixed effects provides evidence that education obtained in Asia tends to be less valued than education obtained in South America, Africa and East Europe. In turn, education obtained in these regions is less valued than education from Oceania, the U.S. and the rest of continental Europe. Education in the UK is the only one with a greater value than education in Canada.

Also, the wage penalty for immigrants increases with their age at arrival. While immigrants arriving between 15 and 19 have about a 3% wage gap, immigrants arriving at 50 or older earned around 47% less than Canadians workers of the same age-cohort (and similar characteristics). Taken as a whole, the results speak of human capital transferability problems.

The replacement of the foreign-born dummy by country of origin fixed effects reveals considerable heterogeneity in the native/immigrant wage gap across regions. In general, larger gaps for immigrants from Asia (with the exception of South-East Asia and Hong Kong) and smaller ones for immigrants from Europe. The different specifications visibly reduce the country fixed effects coefficients. The reduction is sizeable for China, Pakistan, India, Philippines, West and Central Asia and the rest of Asia; though their coefficients remain negative. By the end, we are able to significantly explain the wage penalty for immigrants from the European region (including the UK) and, to a large extent, Oceania, South-East Asia, the US and Hong Kong.

The inclusion of field of study fixed effects shows that some fields are more tradable than others. "Health Assistance" is a tradable field across almost all regions. With the exception of people studying in "East Europe", foreign-educated health technicians do not suffer additional wage penalties. To some extent we observe the same holds true for "Computer Sciences, Mathematics, Physical Sciences and Sciences Technologies" and "Humanities and Visual and Performing Arts". The fields that experience the highest negative wage penalties if studies abroad ("Social and Behavioral Sciences and Law", "Business, Finance and Marketing" and "Education") require country specific knowledge and high communication skills .

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Table 1: Immigrant's Top Countries of Origin by Year of Arrival

	Total	1956 to 1970	1971 to 1980	1981 to 1990	1991 to 2000	After 2000
Top Ten countries						
India	9.3	3.9	7.3	6.7	11.3	16.6
UK	7.8	21.9	13.0	6.6	2.9	2.2
Philippines	7.6	2.5	7.5	7.0	9.5	8.1
China	5.9	2.7	3.2	3.1	8.2	12.5
Hong Kong	5.1	1.9	6.4	6.5	5.8	0.6
US	3.9	6.7	6.7	3.6	1.9	2.2
Poland	3.2	1.2	1.2	7.6	3.0	0.9
Jamaica	3.0	3.9	4.5	3.8	2.0	0.7
Vietnam	2.8	.	3.9	5.0	1.9	0.7
France	2.3	2.4	1.7	1.6	2.3	4.3
Two other Countries						
Pakistan	1.8	.	1.1	0.8	2.7	3.8
Romania	1.7	.	0.4	1.0	2.7	3.7
Rest of the World						
Africa	7.8	3.9	7.0	7.7	8.3	10.6
Rest of America	7.3	7.1	8.4	9.3	6.0	4.6
Rest Europe	7.1	25.9	9.2	6.2	2.7	2.2
East Europe	5.9	7.7	3.0	3.2	9.0	7.5
W. and C. Asia	5.2	1.5	2.7	6.5	6.7	6.3
South America	5.0	2.7	6.6	5.8	3.7	5.4
Rest Asia	4.4	1.1	2.5	4.0	7.0	4.6
South-East Asia	1.8	.	2.3	3.0	1.3	1.1
Oceania	1.3	1.6	1.4	1.2	1.2	1.4
Total	100	9.2	23.8	23.1	30.8	13.2
Numb. of Observ.	651750					

Note: A Missing value “.” indicates that the cell has less than 100 observations.

Table 2: Immigrant's Top Locations of Study by Year of Arrival

	Total	1956 to 1970	1971 to 1980	1981 to 1990	1991 to 2000	After 2000
Top Ten countries						
Canada	55.91	64.85	62.03	64.03	55.09	26.25
India	5.8	1.17	3.5	3.44	7.12	14.26
UK	5.24	10.83	8.95	4.57	2.29	2.69
Philippines	5.05	1.72	4.94	3.94	6.01	7.25
US	3.07	2.65	4.26	2.56	2.43	3.6
China	2.43	.	.	0.75	3.72	8.12
France	1.65	1.43	1.01	0.9	1.75	4.07
Poland	1.63	.	0.63	4.25	1.29	0.58
Romania	1.06	.	.	0.42	1.62	3.26
Pakistan	1.02	.	0.45	0.4	1.33	2.87
Rest of the World						
East Europe	3.23	3.55	1.65	1.92	4.55	5.08
Rest Europe	2.9	8.66	3.55	2.5	1.41	1.94
Africa	2.25	.	1.64	1.79	2.29	5.18
Rest Asia	2.16	0.94	1.92	2.13	2.63	2.4
Rest of America	1.99	1.35	1.6	2.29	1.8	3.05
W. and C. Asia	1.76	.	0.72	1.58	2.26	3.87
South America	1.47	.	1.41	1.21	1.15	3.53
Oceania	0.7	.	0.62	0.44	0.66	1.29
South-east Asia	0.7	.	0.8	0.9	0.6	0.7
Total	100.0	9.2	23.8	23.1	30.8	13.2
Numb. of Observ.	651750					

Note: A Missing value “.” indicates that the cell has less than 100 observations.

Table 3: Distribution of Immigrants and Natives by Field of Study

	Native	Immigrant	Total
Education	7	4	7
Humanities and Visual and Performing Arts	7	7	7
Social and Behavioural Sciences and Law	10	8	10
Business, Finance and Marketing	13	13	13
Small Businesses, Accounting and Business Support	8	9	8
Computer Sc., Math., Physical Sc. And Sc. Technologies	5	11	6
Architecture and Engineering and Engineer Technicians	9	17	10
Construction trade, Mechanics and Woodwork	15	10	15
Health Practicioners and Life Science	4	5	4
Health Assistance	9	9	9
Others	13	7	12
Total	100	100	100

Table 4: Distribution of Immigrants and Natives by CMA of Residence

	Immigrant	Native	Total
Top 20 CMAs			
Toronto	40.9	11.0	14.1
Vancouver	13.0	5.1	5.9
Montreal	12.4	12.9	12.9
Calgary	4.7	4.0	4.0
Ottawa	4.1	4.5	4.4
Edmonton	3.7	3.7	3.7
Hamilton	2.2	2.1	2.1
Winnipeg	2.1	2.3	2.2
Kitchener	1.5	1.4	1.4
London	1.1	1.5	1.5
Windsor	1.0	0.9	0.9
Oshawa	0.9	1.1	1.1
Victoria	0.9	1.1	1.1
St. Catharines–Niagara	0.8	1.1	1.1
Quebec	0.5	3.6	3.3
Abbotsford	0.5	0.4	0.4
Halifax	0.4	1.7	1.6
Guelph	0.4	0.4	0.4
Barrie	0.3	0.6	0.6
Saskatoon	0.3	0.9	0.8
Rest			
Other CMAs	5.3	21.8	20.1
Non-CMAs	3.2	18.0	16.4
Total	10.3	89.7	100

Note: Numbers are rounded up to one decimal point.

Table 5: Age Distribution of Immigrants and Natives

	Natives	Immigrants	Total
20 to 29 years old	20.2	12.3	19.4
30 to 39 years old	26.8	32.8	27.4
40 to 49 years old	29.8	25.1	29.3
50 to 59 years old	20.2	23.4	20.5
60 to 64 years old	3.1	6.7	3.4
	100	100	100

Table 6: Years of Education

Group	Assigned Yrs. of Educ.	Natives	Immigrants	Total
CEGEP (3 - 12 months) ^a	13	26.9	19.0	26.1
CEGEP (13 months - more than 2 years)	14	32.6	25.8	31.9
University certificate below bachelor level	15	6.6	12.0	7.1
Bachelor's degree	16	23.5	26.4	23.8
University certificate above bachelor level	17	3.4	4.3	3.5
Master's degree or Degree in medicine ^b	18	6.2	10.8	6.7
Earned doctorate degree	21	0.9	1.8	0.9
Total		100	100	100

^a It includes trades certificate, registered apprenticeship certificate and CEGEP (between 3 to 12 months).

^b It includes degrees in medicine, dentistry, veterinary and optometry

Table 7: Share of Immigrants with a Canadian Degree by Education Category

	Distribution	Foreign degree	Canadian Degree
Trade ^a	19.0	16	22
Below Bachelor ^b	37.7	36	39
Bachelor	26.4	31	23
Above Bachelor ^c	16.9	18	16
Total	100	100	100

^a It refers to people with 13 years of education.

^b It refers to people with 14 or 15 years of education.

^c It refers to people with more than 16 years of education.

Table 8: Share of Immigrants with a Canadian Degree by Age at Immigration

Age at Immigration ^a	Foreign degree	Canadian degree	Total
19	8.4	91.7	
20	20.6	79.4	
21	30.3	69.7	
22	42.7	57.3	
23	47.5	52.5	
24	53.3	46.7	
25	57.6	42.4	
26	61.9	38.1	
27	64.7	35.4	
28	67.0	33.0	
29	71.3	28.7	
Total	44.1	55.9	100

^a All immigrants who arrived at an age younger than 19 obtained their highest degree of education in Canada.

Table 9: Summary Statistics

	Native	Immigrant
Log. weekly wages	6.8 (0.65)	6.76 (0.67)
Weeks worked	47.01 (10.42)	46.59 (10.72)
Age	40.37 (10.79)	42.37 (10.92)
Age of Imm.	.	23.42 (4.04)
Year of Imm.	.	1986.92 (11.32)
Years of Educ.	14.68 (1.59)	15.14 (1.74)
Years of Educ. (-12)	2.68 (1.59)	3.14 (1.74)
Canadian degree	98%	56%
Yrs. Educ. AboveHS - CAN	2.45 (1.23)	1.27 (1.51)
Yrs. Educ. AboveBACH - CAN	0.18 (0.63)	0.2 (0.74)
Yrs. Educ. AboveHS - FOR	0.03 (0.29)	1.52 (1.73)
Yrs. Educ. AboveBACH - FOR	0.02 (0.26)	0.15 (0.56)
Work Exp.	19.7 (10.89)	21.23 (11.23)
Work Exp. CAN	19.7 (10.89)	17.26 (11.18)
Work Exp. FOR	.	3.96 (3.04)
Weighted Observations	5671380	651750

Table 10: Base Specification

	(1)	(2)	(3)	(4)	(5)	(6)
Const.	5.8405 (0.0022)***	5.8408 (0.0022)***	5.7572 (0.0022)***	5.7567 (0.0022)***	5.7528 (0.0022)***	5.7540 (0.0022)***
Immigrant	-1.1096 (0.002)***	-.0580 (0.0025)***	-.1180 (0.002)***	-.0657 (0.0025)***		
Below Bachelor	0.1652 (0.0014)***	0.1653 (0.0014)***				
Bachelor	0.4456 (0.0017)***	0.4494 (0.0017)***				
Above Bachelor	0.5906 (0.0022)***	0.5908 (0.0022)***				
Yrs. of Educ. (-12)			0.1233 (0.0004)***	0.1242 (0.0004)***	0.1243 (0.0004)***	0.1246 (0.0004)***
Work Exp.	0.0518 (0.0002)***	0.052 (0.0002)***	0.051 (0.0002)***	0.0512 (0.0002)***	0.0512 (0.0002)***	0.0513 (0.0002)***
Work Exp. Square (/100)	-.0879 (0.0005)***	-.0889 (0.0005)***	-.0873 (0.0005)***	-.0882 (0.0005)***	-.0877 (0.0005)***	-.0884 (0.0005)***
Gender	0.2922 (0.0012)***	0.2918 (0.0012)***	0.286 (0.0011)***	0.2859 (0.0011)***	0.2865 (0.0011)***	0.2862 (0.0011)***
Age of Imm. 15-19					-.0266 (0.0042)***	-.0261 (0.0042)***
Age of Imm. 20-24					-.0800 (0.0033)***	-.0491 (0.0036)***
Age of Imm. 25-29					-.1863 (0.0029)***	-.1227 (0.0038)***
Loc. of study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2137	0.2167	0.2115	0.2143	0.2126	0.2147

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is Canada.

Table 11: Separating Years of Education Above High School from Years of Education Above Bachelor's Degree

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.1180 (0.002)***	-0.0657 (0.0025)***	-0.1186 (0.002)***	-0.0655 (0.0025)***	-0.0677 (0.0025)***	-0.0565 (0.0025)***	-0.0351 (0.0039)***	-0.0303 (0.0039)***
Yrs. of Educ. (- 12)	0.1233 (0.0004)***	0.1242 (0.0004)***						
Yrs. of Educ Above HS			0.1492 (0.0005)***	0.151 (0.0005)***				
Yrs. of Educ Above BACH			0.068 (0.001)***	0.0661 (0.001)***				
Yrs. of Educ Above HS - CAN					0.1516 (0.0005)***	0.1517 (0.0005)***	0.1515 (0.0005)***	0.1515 (0.0005)***
Yrs. of Educ Above BACH - CAN					0.0726 (0.001)***	0.0708 (0.0011)***	0.0719 (0.001)***	0.0703 (0.0011)***
Yrs. of Educ Above HS - FOR					0.1178 (0.0011)***	0.1296 (0.0016)***	0.1258 (0.0012)***	0.1361 (0.0016)***
Yrs. of Educ Above BACH - FOR					0.0596 (0.0021)***	0.0441 (0.0024)***	0.0581 (0.0021)***	0.0469 (0.0024)***
Work Exp.	0.051 (0.0002)***	0.0512 (0.0002)***	0.0516 (0.0002)***	0.0518 (0.0002)***	0.0515 (0.0002)***	0.0518 (0.0002)***		
Work Exp. Square (/100)	-0.0873 (0.0005)***	-0.0882 (0.0005)***	-0.0878 (0.0005)***	-0.0888 (0.0005)***	-0.0876 (0.0005)***	-0.0888 (0.0005)***		
Work Exp. - CAN							0.0522 (0.0002)***	0.052 (0.0002)***
Work Exp. Square (/100) - CAN							-0.0908 (0.0005)***	-0.0908 (0.0005)***
Work Exp. - FOR							0.0066 (0.002)***	0.0099 (0.002)***
Work Exp. Square (/100) - FOR							-0.0085 (0.0211)	-0.0394 (0.0211)*
Gender	0.286 (0.0011)***	0.2859 (0.0011)***	0.2926 (0.0012)***	0.2924 (0.0011)***	0.2935 (0.0011)***	0.2927 (0.0011)***	0.2934 (0.0011)***	0.2928 (0.0011)***
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2115	0.2143	0.2152	0.2182	0.2163	0.2185	0.2178	0.2193

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is "Canada".

Table 12: Modeling Return to Education by Including Educational Group Dummies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.1096 (0.002)***	-0.0580 (0.0025)***	-0.0787 (0.0023)***	-0.0603 (0.0025)***	-0.0458 (0.0038)***	-0.0285 (0.0039)***	-0.0359 (0.0038)***	-0.0283 (0.0039)***
Below Bachelor	0.1652 (0.0014)***	0.1653 (0.0014)***	0.1663 (0.0014)***	0.1667 (0.0014)***	0.1647 (0.0014)***	0.1649 (0.0014)***	0.1654 (0.0014)***	0.1657 (0.0014)***
Bachelor	0.4456 (0.0017)***	0.4494 (0.0017)***	0.4558 (0.0017)***	0.4557 (0.0017)***	0.447 (0.0017)***	0.4496 (0.0017)***	0.4544 (0.0017)***	0.4542 (0.0017)***
Above Bachelor	0.5906 (0.0022)***	0.5908 (0.0022)***	0.5997 (0.0023)***	0.5991 (0.0023)***	0.5921 (0.0022)***	0.5916 (0.0022)***	0.5993 (0.0023)***	0.5986 (0.0023)***
Below Bachelor - FOR			-0.0390 (0.005)***	-0.0667 (0.0082)***			-0.0282 (0.005)***	-0.0462 (0.0082)***
Bachelor - FOR			-0.1530 (0.0054)***	-0.1525 (0.0088)***			-0.1155 (0.0054)***	-0.1152 (0.0088)***
Above Bachelor - FOR			-0.0801 (0.0057)***	-0.1441 (0.009)***			-0.0677 (0.0057)***	-0.1165 (0.0091)***
Work Exp.	0.0518 (0.0002)***	0.052 (0.0002)***	0.0518 (0.0002)***	0.0521 (0.0002)***				
Work Exp. Square (/100)	-0.0879 (0.0005)***	-0.0889 (0.0005)***	-0.0879 (0.0005)***	-0.0891 (0.0005)***				
Work Exp. - CAN					0.0526 (0.0002)***	0.0523 (0.0002)***	0.0524 (0.0002)***	0.0522 (0.0002)***
Work Exp. Square (/100) - CAN					-0.0914 (0.0005)***	-0.0910 (0.0005)***	-0.0910 (0.0005)***	-0.0910 (0.0005)***
Work Exp. - FOR					-0.0092 (0.0019)***	0.0068 (0.002)***	0.0015 (0.002)	0.0077 (0.002)***
Work Exp. Square (/100) - FOR					0.167 (0.0199)***	0.0086 (0.0206)	0.051 (0.0206)**	-0.139 (0.0207)
Gender	0.2922 (0.0012)***	0.2918 (0.0012)***	0.2928 (0.0012)***	0.2919 (0.0012)***	0.2923 (0.0012)***	0.2919 (0.0012)***	0.2927 (0.0012)***	0.292 (0.0012)***
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2137	0.2167	0.2147	0.217	0.2156	0.2176	0.2162	0.2178

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is “Canada”.

Table 13: Interacting Education with Groups of Location of Study

	(1)	(2)	(3)	(4)
Immigrant	-0.0964 (0.0028)***	-0.0725 (0.0041)***		
Below Bachelor	0.1465 (0.0014)***	0.1457 (0.0014)***	0.1466 (0.0014)***	0.1456 (0.0014)***
Bachelor	0.4189 (0.0017)***	0.4176 (0.0017)***	0.4186 (0.0017)***	0.4171 (0.0017)***
Above Bachelor	0.5616 (0.0023)***	0.561 (0.0023)***	0.5612 (0.0023)***	0.5601 (0.0023)***
Work Exp.	0.0525 (0.0002)***		0.0527 (0.0002)***	
Work Exp. Square (/100)	-0.0892 (0.0005)***		-0.0899 (0.0005)***	
Work Exp. - CAN		0.0524 (0.0002)***		0.0525 (0.0002)***
Work Exp. Square (/100) - CAN		-0.0905 (0.0005)***		-0.0909 (0.0005)***
Work Exp. - FOR		0.0132 (0.002)***		0.0116 (0.002)***
Work Exp. Square (/100) - FOR		-0.0720 (0.0205)***		-0.0518 (0.0205)**
Gender	0.2868 (0.0011)***	0.2869 (0.0011)***	0.2869 (0.0011)***	0.2869 (0.0011)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes
CMA/Province F.E.	Yes	Yes	Yes	Yes
Country/area of origin F.E.	No	No	Yes	Yes
Weighted Obs.	6323125	6323125	6323125	6323125

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is “Eastern Europe”.

Cont. - Interacting Education with Groups of Location of Study

	(1)	(2)	(3)	(4)
Trade - WEST	0.0826 (0.0097)***	0.0439 (0.0097)***	0.0259 (0.0099)***	0.0013 (0.01)
Below Bachelor - WEST	0.0485 (0.0074)***	0.0293 (0.0074)***	-.0015 (0.0077)	-.0080 (0.0077)
Bachelor - WEST	-.0206 (0.0085)**	-.0175 (0.0085)**	-.0358 (0.0086)***	-.0290 (0.0086)***
Above Bachelor - WEST	-.0062 (0.0066)	-.0051 (0.0066)	-.0104 (0.0066)	-.0093 (0.0066)
Trade - EASTEU	0.0674 (0.0167)***	0.0608 (0.0167)***	0.00005 (0.0179)	-.0213 (0.0179)
Below Bachelor - EASTEU	-.0599 (0.0134)***	-.0451 (0.0133)***	-.1262 (0.0152)***	-.1248 (0.0151)***
Bachelor - EASTEU	-.1636 (0.0161)***	-.0960 (0.0162)***	-.2392 (0.0182)***	-.1961 (0.0182)***
Above Bachelor - EASTEU	-.1612 (0.0144)***	-.1350 (0.0144)***	-.2309 (0.0162)***	-.2235 (0.0161)***
Trade - CHINAWC	-.1964 (0.0328)***	-.1595 (0.032)***	-.1544 (0.0332)***	-.1365 (0.0325)***
Below Bachelor - CHINAWC	-.2296 (0.0172)***	-.1590 (0.0173)***	-.1835 (0.0182)***	-.1406 (0.0182)***
Bachelor - CHINAWC	-.2587 (0.0145)***	-.1699 (0.0147)***	-.2087 (0.016)***	-.1517 (0.0161)***
Above Bachelor - CHINAWC	-.1928 (0.0279)***	-.1452 (0.0278)***	-.1468 (0.0288)***	-.1253 (0.0286)***
Trade - IND_PAK_ASIA	-.0913 (0.0228)***	-.0769 (0.0228)***	-.0474 (0.0232)**	-.0467 (0.0233)**
Below Bachelor - IND_PAK_ASIA	-.1870 (0.0113)***	-.1643 (0.0113)***	-.1425 (0.0125)***	-.1327 (0.0125)***
Bachelor - IND_PAK_ASIA	-.3342 (0.0105)***	-.2993 (0.0106)***	-.2902 (0.0121)***	-.2674 (0.0121)***
Above Bachelor - IND_PAK_ASIA	-.4249 (0.0149)***	-.3997 (0.015)***	-.3843 (0.0163)***	-.3705 (0.0164)***
Trade - RESTAME	-.1110 (0.0166)***	-.1133 (0.0167)***	-.0633 (0.0171)***	-.0561 (0.0173)***
Below Bachelor - RESTAME	-.1296 (0.015)***	-.1165 (0.015)***	-.0818 (0.0156)***	-.0583 (0.0156)***
Bachelor - RESTAME	-.2327 (0.0199)***	-.1666 (0.0203)***	-.1899 (0.0205)***	-.1119 (0.0209)***
Above Bachelor - RESTAME	-.2567 (0.0282)***	-.2213 (0.0286)***	-.2174 (0.0285)***	-.1706 (0.0289)***

Note: *, ** and *** denote significance at 10%, 5% and 1% levels respectively. Robust standard errors are in parenthesis.

Cont. - Interacting Education with Groups of Location of Study

	(1)	(2)	(3)	(4)
Trade - SOUTHEASTASIA	-.0882 (0.0233)***	-.0828 (0.0235)***	-.0881 (0.0242)***	-.0820 (0.0242)***
Below Bachelor - SOUTHEASTASIA	-.1291 (0.013)***	-.1098 (0.0129)***	-.1428 (0.0151)***	-.1242 (0.0151)***
Bachelor - SOUTHEASTASIA	-.2210 (0.0117)***	-.1989 (0.0118)***	-.2371 (0.0146)***	-.2155 (0.0147)***
Above Bachelor - SOUTHEASTASIA	-.3532 (0.0279)***	-.3394 (0.028)***	-.3669 (0.0292)***	-.3540 (0.0292)***
Trade - AFRICA	-.0439 (0.0283)	-.0105 (0.0284)	-.0111 (0.0293)	-.0015 (0.0293)
Below Bachelor - AFRICA	-.1310 (0.0183)***	-.0819 (0.0185)***	-.0988 (0.0198)***	-.0725 (0.0199)***
Bachelor - AFRICA	-.1662 (0.0234)***	-.1179 (0.0232)***	-.1335 (0.0246)***	-.1068 (0.0244)***
Above Bachelor - AFRICA	-.0387 (0.0421)	-.0097 (0.0419)	-.0085 (0.0427)	0.0007 (0.0424)

Note: *, ** and *** denote significance at 10%, 5% and 1% levels respectively. Robust standard errors are in parenthesis.

Table 14: Base Specification - Sample Extension: Immigrants Arriving at 15 and older

	(1)	(2)	(3)	(4)	(5)	(6)
Const.	5.8839 (0.0022)***	5.8694 (0.0022)***	5.8133 (0.0022)***	5.7987 (0.0022)***	5.7764 (0.0022)***	5.7768 (0.0022)***
Immigrant	-0.2336 (0.0016)***	-0.0973 (0.0022)***	-0.2445 (0.0016)***	-0.1107 (0.0022)***		
Below Bachelor	0.1617 (0.0014)***	0.1641 (0.0014)***				
Bachelor	0.4178 (0.0017)***	0.4351 (0.0017)***				
Above Bachelor	0.5596 (0.0021)***	0.5678 (0.0021)***				
Yrs. of Educ. (-12)			0.1143 (0.0004)***	0.1173 (0.0004)***	0.1193 (0.0004)***	0.1197 (0.0004)***
Work Exp.	0.0484 (0.0002)***	0.0499 (0.0002)***	0.0476 (0.0002)***	0.049 (0.0002)***	0.0492 (0.0002)***	0.0498 (0.0002)***
Work Exp. Square (/100)	-0.0799 (0.0005)***	-0.0842 (0.0005)***	-0.0793 (0.0005)***	-0.0832 (0.0005)***	-0.0813 (0.0005)***	-0.0836 (0.0005)***
Gender	0.2827 (0.0011)***	0.2838 (0.0011)***	0.2756 (0.0011)***	0.2768 (0.0011)***	0.2801 (0.0011)***	0.2795 (0.0011)***
Age of Imm. 15-19					-0.0258 (0.0042)***	-0.0249 (0.0042)***
Age of Imm. 20-24					-0.0831 (0.0033)***	-0.0469 (0.0035)***
Age of Imm. 25-29					-0.1825 (0.0029)***	-0.1060 (0.0035)***
Age of Imm. 30-34					-0.3091 (0.0033)***	-0.2078 (0.0039)***
Age of Imm. 35-39					-0.4179 (0.0042)***	-0.2957 (0.0048)***
Age of Imm. 40-44					-0.5285 (0.0058)***	-0.3960 (0.0063)***
Age of Imm. 45-49					-0.6128 (0.009)***	-0.4725 (0.0093)***
Age of Imm. 50 plus					-0.6441 (0.0149)***	-0.5053 (0.0147)***
Loc. of study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6880170	6880170	6880170	6880170	6880170	6880170
R^2	0.194	0.2066	0.1927	0.2043	0.204	0.2098

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is Canada.

Table 15: Separating Years of Education Above High School from Years of Education Above Bachelor's Degree - Immigrants 15 and older

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.2445 (0.0016)***	-0.1107 (0.0022)***	-0.2446 (0.0016)***	-0.1066 (0.0022)***	-0.1052 (0.0022)***	-0.0832 (0.0023)***	-0.0081 (0.0031)***	-0.0113 (0.0031)***
Yrs of Educ. (-12)	0.1143 (0.0004)***	0.1173 (0.0004)***						
Yrs. of Educ Above HS			0.1393 (0.0005)***	0.1463 (0.0005)***				
Yrs. of Educ Above BACH			0.0671 (0.0009)***	0.0617 (0.0009)***				
Yrs. of Educ Above HS - CAN					0.1485 (0.0005)***	0.1488 (0.0005)***	0.1483 (0.0005)***	0.1486 (0.0005)***
Yrs. of Educ Above BACH - CAN					0.0827 (0.001)***	0.0756 (0.001)***	0.0784 (0.001)***	0.0744 (0.001)***
Yrs. of Educ Above HS - FOR					0.0814 (0.0009)***	0.1086 (0.0012)***	0.1109 (0.0009)***	0.1264 (0.0012)***
Yrs. of Educ Above BACH - FOR					0.0626 (0.0015)***	0.0433 (0.0016)***	0.0637 (0.0015)***	0.0499 (0.0016)***
Work Exp.	0.0476 (0.0002)***	0.049 (0.0002)***	0.0481 (0.0002)***	0.0497 (0.0002)***	0.0489 (0.0002)***	0.0499 (0.0002)***		
Work Exp. Square (/100)	-0.0793 (0.0005)***	-0.0832 (0.0005)***	-0.0797 (0.0005)***	-0.0840 (0.0005)***	-0.0817 (0.0005)***	-0.0847 (0.0005)***		
Work Exp. - CAN							0.051 (0.0002)***	0.0506 (0.0002)***
Work Exp. Square (/100) - CAN							-0.0886 (0.0005)***	-0.0881 (0.0005)***
Work Exp. - FOR							0.0043 (0.0006)***	0.0072 (0.0006)***
Work Exp. Square (/100) - FOR							-0.0196 (0.0023)***	-0.0240 (0.0023)***
Gender	0.2756 (0.0011)***	0.2768 (0.0011)***	0.2822 (0.0011)***	0.2841 (0.0011)***	0.2868 (0.0011)***	0.2856 (0.0011)***	0.289 (0.0011)***	0.2879 (0.0011)***
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	6880170	6880170	6880170	6880170	6880170	6880170	6880170	6880170
R ²	0.1927	0.2043	0.1959	0.2086	0.2023	0.2098	0.2118	0.2159

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is "Canada".

Table 16: Modeling Return to Education by Including Educational Group Dummies - Immigrants 15 and older

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-.2336 (0.0016)***	-.0973 (0.0022)***	-.1373 (0.0021)***	-.1006 (0.0022)***	-.0419 (0.003)***	-.0119 (0.0031)***	-.0174 (0.0031)***	-.0155 (0.0031)***
Below Bachelor	0.1617 (0.0014)***	0.1641 (0.0014)***	0.166 (0.0014)***	0.1655 (0.0014)***	0.1622 (0.0014)***	0.1637 (0.0014)***	0.1629 (0.0014)***	0.1643 (0.0014)***
Bachelor	0.4178 (0.0017)***	0.4351 (0.0017)***	0.454 (0.0017)***	0.4529 (0.0017)***	0.4287 (0.0016)***	0.4381 (0.0017)***	0.4505 (0.0017)***	0.4512 (0.0017)***
Above Bachelor	0.5596 (0.0021)***	0.5678 (0.0021)***	0.5985 (0.0023)***	0.5951 (0.0023)***	0.5725 (0.0021)***	0.5758 (0.0021)***	0.5967 (0.0023)***	0.5966 (0.0023)***
Below Bachelor - FOR			-.0889 (0.0038)***	-.0802 (0.0062)***			-.0301 (0.0038)***	-.0508 (0.0062)***
Bachelor - FOR			-.2806 (0.0039)***	-.2244 (0.0065)***			-.1702 (0.0039)***	-.1628 (0.0065)***
Above Bachelor - FOR			-.2137 (0.0044)***	-.2302 (0.0068)***			-.1289 (0.0043)***	-.1692 (0.0068)***
Work Exp.	0.0484 (0.0002)***	0.0499 (0.0002)***	0.0492 (0.0002)***	0.0503 (0.0002)***				
Work Exp. 2 (/100)	-.0799 (0.0005)***	-.0842 (0.0005)***	-.0821 (0.0005)***	-.0853 (0.0005)***				
Work Exp. - CAN					0.052 (0.0002)***	0.051 (0.0002)***	0.0512 (0.0002)***	0.0507 (0.0002)***
Work Exp. 2 (/100) - CAN					-.0903 (0.0005)***	-.0887 (0.0005)***	-.0887 (0.0005)***	-.0881 (0.0005)***
Work Exp. - FOR					-.0016 (0.0006)***	0.0066 (0.0006)***	0.0037 (0.0006)***	0.0072 (0.0006)***
Work Exp. 2 (/100) - FOR					-.0026 (0.0023)	-.0206 (0.0023)***	-.0173 (0.0023)***	-.0243 (0.0022)***
Gender	0.2827 (0.0011)***	0.2838 (0.0011)***	0.2862 (0.0011)***	0.2849 (0.0011)***	0.2869 (0.0011)***	0.2868 (0.0011)***	0.2887 (0.0011)***	0.2876 (0.0011)***
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	6880170	6880170	6880170	6880170	6880170	6880170	6880170	6880170
R^2	0.194	0.2066	0.2002	0.2083	0.2077	0.2132	0.2099	0.2142

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is “Canada”.

Table 17: Separating Years of Education Above High School from Years of Education Above Bachelor's Degree - Females

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.1040 (0.0028)***	-0.0293 (0.0033)***	-0.1044 (0.0028)***	-0.0285 (0.0033)***	-0.0286 (0.0033)***	-0.0145 (0.0034)***	-0.0007 (0.0052)	0.0102 (0.0052)**
Yrs. of Educ. (-12)	0.1495 (0.0005)***	0.1512 (0.0005)***						
Yrs. of Educ Above HS			0.1821 (0.0007)***	0.1843 (0.0007)***				
Yrs. of Educ Above BACH			0.0766 (0.0014)***	0.076 (0.0014)***				
Yrs. of Educ Above HS - CAN					0.1858 (0.0007)***	0.1856 (0.0007)***	0.1855 (0.0007)***	0.1854 (0.0007)***
Yrs. of Educ Above BACH - CAN					0.0825 (0.0015)***	0.0808 (0.0015)***	0.082 (0.0015)***	0.0804 (0.0015)***
Yrs. of Educ Above HS - FOR					0.1359 (0.0015)***	0.1499 (0.0022)***	0.1425 (0.0016)***	0.155 (0.0022)***
Yrs. of Educ Above BACH - FOR					0.0648 (0.0032)***	0.0503 (0.0038)***	0.0636 (0.0032)***	0.0524 (0.0038)***
Work Exp.	0.0461 (0.0003)***	0.0461 (0.0003)***	0.0469 (0.0003)***	0.0469 (0.0003)***	0.0467 (0.0003)***	0.0469 (0.0003)***		
Work Exp. Square (/100)	-0.0802 (0.0007)***	-0.0806 (0.0007)***	-0.0810 (0.0007)***	-0.0816 (0.0007)***	-0.0808 (0.0007)***	-0.0816 (0.0007)***		
Work Exp. - CAN							0.0475 (0.0003)***	0.0474 (0.0003)***
Work Exp. Square (/100) - CAN							-0.0841 (0.0007)***	-0.0841 (0.0007)***
Work Exp. - FOR							0.0073 (0.0027)***	0.0095 (0.0027)***
Work Exp. Square (/100) - FOR							-0.0095 (0.0284)	-0.0352 (0.0284)
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	2909150	2909150	2909150	2909150	2909150	2909150	2909150	2909150
R^2	0.2046	0.2087	0.2112	0.2156	0.214	0.2161	0.2156	0.2173

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is "Canada".

Table 18: Modeling Return to Education by Including Educational Group Dummies - Females

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.0933 (0.0028)***	-0.0202 (0.0033)***	-0.0444 (0.0032)***	-0.0223 (0.0033)***	-0.0263 (0.0051)***	0.0087 (0.0052)*	-0.0057 (0.0051)	0.0091 (0.0052)*
Below Bachelor	0.2508 (0.0021)***	0.2519 (0.0021)***	0.2531 (0.0021)***	0.2544 (0.0022)***	0.2507 (0.0021)***	0.2516 (0.0021)***	0.2526 (0.0021)***	0.2538 (0.0022)***
Bachelor	0.5589 (0.0024)***	0.5639 (0.0024)***	0.5728 (0.0024)***	0.5735 (0.0024)***	0.5602 (0.0024)***	0.5638 (0.0024)***	0.5713 (0.0024)***	0.5721 (0.0024)***
Above Bachelor	0.7167 (0.003)***	0.7209 (0.003)***	0.73 (0.0031)***	0.7304 (0.0031)***	0.7183 (0.003)***	0.721 (0.003)***	0.7293 (0.0031)***	0.7295 (0.0031)***
Below Bachelor - FOR			-0.0665 (0.0068)***	-0.1151 (0.0126)***			-0.0578 (0.0069)***	-0.1032 (0.0126)***
Bachelor - FOR			-0.2140 (0.0072)***	-0.2455 (0.0131)***			-0.1810 (0.0073)***	-0.2175 (0.0132)***
Above Bachelor - FOR			-0.1199 (0.0077)***	-0.2102 (0.0137)***			-0.1083 (0.0077)***	-0.1914 (0.0137)***
Work Exp.	0.0469 (0.0003)***	0.047 (0.0003)***	0.0469 (0.0003)***	0.0471 (0.0003)***				
Work Exp. Square (/100)	-0.0805 (0.0007)***	-0.0811 (0.0007)***	-0.0806 (0.0007)***	-0.0814 (0.0007)***				
Work Exp. - CAN					0.0479 (0.0003)***	0.0475 (0.0003)***	0.0476 (0.0003)***	0.0474 (0.0003)***
Work Exp. Square (/100) - CAN					-0.0844 (0.0007)***	-0.0838 (0.0007)***	-0.0838 (0.0007)***	-0.0837 (0.0007)***
Work Exp. - FOR					-0.0172 (0.0026)***	0.0038 (0.0027)	0.0002 (0.0027)	0.0057 (0.0027)**
Work Exp. Square (/100) - FOR					0.2665 (0.0272)***	0.0465 (0.0278)*	0.0769 (0.0278)***	0.0086 (0.0279)
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	2909150	2909150	2909150	2909150	2909150	2909150	2909150	2909150
R^2	0.2077	0.2118	0.21	0.2126	0.21	0.213	0.2116	0.2137

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is “Canada”.

Table 19: Separating Years of Education Above High School from Years of Education Above Bachelor's Degree - Males

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.1250 (0.0029)***	-0.0902 (0.0036)***	-0.1257 (0.0029)***	-0.0904 (0.0036)***	-0.0960 (0.0035)***	-0.0876 (0.0037)***	-0.0603 (0.0057)***	-0.0607 (0.0057)***
Yrs. of Educ. (-12)	0.1034 (0.0005)***	0.1037 (0.0005)***						
Yrs. of Educ Above HS			0.1226 (0.0008)***	0.1242 (0.0008)***				
Yrs. of Educ Above BACH			0.0636 (0.0013)***	0.0608 (0.0013)***				
Yrs. of Educ Above HS - CAN					0.124 (0.0008)***	0.1243 (0.0008)***	0.1241 (0.0008)***	0.1243 (0.0008)***
Yrs. of Educ Above BACH - CAN					0.0664 (0.0015)***	0.0643 (0.0015)***	0.0657 (0.0015)***	0.0638 (0.0015)***
Yrs. of Educ Above HS - FOR					0.104 (0.0016)***	0.1158 (0.0022)***	0.1138 (0.0017)***	0.1242 (0.0023)***
Yrs. of Educ Above BACH - FOR					0.0593 (0.0028)***	0.0449 (0.0031)***	0.0576 (0.0028)***	0.0486 (0.0031)***
Work Exp.	0.0574 (0.0003)***	0.0576 (0.0003)***	0.0577 (0.0003)***	0.058 (0.0003)***	0.0577 (0.0003)***	0.058 (0.0003)***		
Work Exp. Square (/100)	-0.0978 (0.0007)***	-0.0990 (0.0007)***	-0.0980 (0.0007)***	-0.0993 (0.0007)***	-0.0979 (0.0007)***	-0.0993 (0.0007)***		
Work Exp. - CAN							0.0582 (0.0003)***	0.058 (0.0003)***
Work Exp. Square (/100) - CAN							-0.1008 (0.0007)***	-0.1009 (0.0007)***
Work Exp. - FOR							0.0059 (0.003)**	0.0096 (0.003)***
Work Exp. Square (/100) - FOR							-0.0048 (0.0307)	-0.0341 (0.0308)
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	3413970	3413970	3413970	3413970	3413970	3413970	3413970	3413970
R^2	0.1611	0.1639	0.1631	0.1661	0.1635	0.1662	0.165	0.1668

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is "Canada".

Table 20: Modeling Return to Education by Including Educational Group Dummies - Males

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant	-0.1184 (0.0029)***	-0.0839 (0.0036)***	-0.1008 (0.0033)***	-0.0857 (0.0036)***	-0.0600 (0.0056)***	-0.0548 (0.0057)***	-0.0568 (0.0057)***	-0.0546 (0.0057)***
Below Bachelor	0.1212 (0.0019)***	0.121 (0.0019)***	0.1217 (0.0019)***	0.1219 (0.0019)***	0.1205 (0.0019)***	0.1204 (0.0019)***	0.1206 (0.0019)***	0.1206 (0.0019)***
Bachelor	0.3677 (0.0024)***	0.3711 (0.0024)***	0.3745 (0.0024)***	0.3741 (0.0024)***	0.3696 (0.0024)***	0.372 (0.0024)***	0.3734 (0.0024)***	0.373 (0.0024)***
Above Bachelor	0.5041 (0.0032)***	0.5016 (0.0033)***	0.509 (0.0034)***	0.5082 (0.0034)***	0.506 (0.0032)***	0.5034 (0.0033)***	0.5093 (0.0034)***	0.5084 (0.0034)***
Below Bachelor - FOR			-0.0217 (0.0073)***	-0.0385 (0.0108)***			-0.0095 (0.0074)	-0.0131 (0.0109)
Bachelor - FOR			-0.0989 (0.0079)***	-0.0768 (0.0119)***			-0.0564 (0.008)***	-0.0329 (0.012)***
Above Bachelor - FOR			-0.0432 (0.0082)***	-0.0914 (0.0121)***			-0.0298 (0.0082)***	-0.0580 (0.0122)***
Work Exp.	0.0578 (0.0003)***	0.0581 (0.0003)***	0.0578 (0.0003)***	0.0582 (0.0003)***				
Work Exp. Square (/100)	-0.0981 (0.0007)***	-0.0995 (0.0007)***	-0.0982 (0.0007)***	-0.0996 (0.0007)***				
Work Exp. - CAN					0.0584 (0.0003)***	0.0581 (0.0003)***	0.0583 (0.0003)***	0.0581 (0.0003)***
Work Exp. Square (/100) - CAN					-0.1012 (0.0007)***	-0.1010 (0.0007)***	-0.1010 (0.0007)***	-0.1010 (0.0007)***
Work Exp. - FOR					-0.0011 (0.0028)	0.0102 (0.0029)***	0.004 (0.0029)	0.0101 (0.0029)***
Work Exp. Square (/100) - FOR					0.0732 (0.0288)**	-0.0329 (0.03)	0.0194 (0.0298)	-0.0386 (0.0301)
Loc. of study F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	3413970	3413970	3413970	3413970	3413970	3413970	3413970	3413970
R^2	0.1628	0.1658	0.1632	0.1659	0.1646	0.1664	0.1647	0.1665

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the location of study fixed effects is “Canada”.

Table 21: Immigrant Wage Gap by Country of Origin - Base Specification

	(1)	(2)	(3)	(4)	(5)	(6)
Below Bachelor	0.1452 (0.0014)***	0.1456 (0.0014)***				
Bachelor	0.4108 (0.0017)***	0.4131 (0.0017)***				
Above Bachelor	0.5535 (0.0022)***	0.5542 (0.0022)***				
Yrs. of Educ. (- 12)			0.116 (0.0004)***	0.1167 (0.0004)***	0.1166 (0.0004)***	0.1169 (0.0004)***
Work Exp.	0.0526 (0.0002)***	0.0527 (0.0002)***	0.0519 (0.0002)***	0.0519 (0.0002)***	0.0521 (0.0002)***	0.052 (0.0002)***
Work Exp. Square (/100)	-0.0898 (0.0005)***	-0.0899 (0.0005)***	-0.0892 (0.0005)***	-0.0891 (0.0005)***	-0.0894 (0.0005)***	-0.0893 (0.0005)***
Gender	0.287 (0.0011)***	0.2869 (0.0011)***	0.2823 (0.0011)***	0.2823 (0.0011)***	0.2827 (0.0011)***	0.2826 (0.0011)***
Age of Imm. 15-19					0.0549 (0.0053)***	0.0166 (0.0054)***
Age of Imm. 20-24						
Age of Imm. 25-29					-0.0814 (0.0043)***	-0.0573 (0.0044)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes	Yes	Yes
CMA/Province F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Country/area of Orig. F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Group Loc. of Study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2455	0.2468	0.2445	0.2458	0.2452	0.246
Country/area Weighted Ave.	-0.1540 (0.0026)***	-0.1007 (0.0030)***	-0.1648 (0.0026)***	-0.1106 (0.0030)***	-0.1390 (0.0037)***	-0.0967 (0.0040)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the groups of location of study is “Canada”. The mother tongue fixed effects incorporates a dummy for English mother tongue and a dummy for French Mother tongue. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is “Canada”.

Table 22: Base Specification - Weighted Average of Country of Origin Dummies

	(1)	(2)	(3)	(4)
Const.	5.8415 (0.0022)***	5.8408 (0.0022)***	5.7573 (0.0022)***	5.7561 (0.0022)***
Immigrant				
Below Bachelor	0.1653 (0.0014)***	0.1655 (0.0014)***		
Bachelor	0.4478 (0.0017)***	0.45 (0.0017)***		
Above Bachelor	0.5929 (0.0022)***	0.5926 (0.0022)***		
Yrs. of Educ. (-12)			0.124 (0.0004)***	0.1246 (0.0004)***
Work Exp.	0.0521 (0.0002)***	0.0522 (0.0002)***	0.0513 (0.0002)***	0.0513 (0.0002)***
Work Exp. Square (/100)	-0.0894 (0.0005)***	-0.0896 (0.0005)***	-0.0888 (0.0005)***	-0.0889 (0.0005)***
Gender	0.2923 (0.0012)***	0.2921 (0.0012)***	0.2862 (0.0011)***	0.2862 (0.0011)***
Country/area of origin F.E.	Yes	Yes	Yes	Yes
Loc. of study F.E.	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125
R^2	0.216	0.2175	0.2139	0.2152
Country/area of origin (Weighted Av.)	-0.1095 (0.0020)***	-0.0569 (0.0025)***	-0.1180 (0.0020)***	-0.0659 (0.0026)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category for country/area of origin fixed effect is “Canada”.

Table 23: Immigrant Wage Gap by Country of Origin - Separating Years of Education Above High School from Years of Education Above Bachelor's Degree

	(1)	(2)	(3)	(4)	(5)	(6)
Yrs. of Educ Above HS	0.139 (0.0005)***	0.1399 (0.0005)***				
Yrs. of Educ Above BACH	0.0677 (0.001)***	0.0672 (0.001)***				
Yrs. of Educ Above HS - CAN			0.1408 (0.0005)***	0.1404 (0.0005)***	0.1406 (0.0005)***	0.1402 (0.0005)***
Yrs. of Educ Above BACH - CAN			0.0724 (0.001)***	0.0704 (0.001)***	0.0719 (0.001)***	0.0699 (0.001)***
Yrs. of Educ Above HS - FOR			0.1133 (0.0012)***	0.1271 (0.0016)***	0.1191 (0.0012)***	0.1326 (0.0016)***
Yrs. of Educ Above BACH - FOR			0.0558 (0.0021)***	0.0514 (0.0024)***	0.054 (0.0021)***	0.0532 (0.0024)***
Work Exp.	0.0524 (0.0002)***	0.0525 (0.0002)***	0.0524 (0.0002)***	0.0525 (0.0002)***		
Work Exp. Square (/100)	-0.0896 (0.0005)***	-0.0897 (0.0005)***	-0.0895 (0.0005)***	-0.0897 (0.0005)***		
Work Exp. - CAN					0.0524 (0.0002)***	0.0524 (0.0002)***
Work Exp. Square (/100) - CAN					-0.0908 (0.0005)***	-0.0909 (0.0005)***
Work Exp. - FOR					0.006 (0.002)***	0.0116 (0.002)***
Work Exp. Square (/100) - FOR					-0.0032 (0.0208)	-0.0463 (0.0209)**
Gender	0.2879 (0.0011)***	0.2879 (0.0011)***	0.2886 (0.0011)***	0.2881 (0.0011)***	0.2886 (0.0011)***	0.2881 (0.0011)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes	Yes	Yes
CMA/Province F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Country/area of Orig. F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Group Loc. of Study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R ²	0.2473	0.2486	0.248	0.2487	0.2485	0.2491
Country/area Weighted Ave.	-0.1622 (0.0026)***	-0.10743 (0.0030)***	-0.1207 (0.0030)***	-0.1021 (0.0030)***	-0.0848 (0.0042)***	-0.0769 (0.0042)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the groups of location of study is "Canada". The mother tongue fixed effects incorporates a dummy for English mother tongue and a dummy for French Mother tongue. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is "Canada".

Table 24: Immigrant Wage Gap by Country of Origin - Educational Group Dummies

	(1)	(2)	(3)	(4)	(5)	(6)
Below Bachelor	0.1452 (0.0014)***	0.1456 (0.0014)***	0.1471 (0.0014)***	0.1465 (0.0014)***	0.1464 (0.0014)***	0.1456 (0.0014)***
Bachelor	0.4108 (0.0017)***	0.4131 (0.0017)***	0.4191 (0.0017)***	0.4185 (0.0017)***	0.4178 (0.0017)***	0.417 (0.0017)***
Above Bachelor	0.5535 (0.0022)***	0.5542 (0.0022)***	0.5623 (0.0023)***	0.5613 (0.0023)***	0.5616 (0.0023)***	0.5602 (0.0023)***
Below Bachelor - FOR			-.0562 (0.005)***	-.0458 (0.008)***	-.0457 (0.0051)***	-.0266 (0.008)***
Bachelor - FOR			-.1314 (0.0054)***	-.1191 (0.0084)***	-.1041 (0.0055)***	-.0834 (0.0085)***
Above Bachelor - FOR			-.0816 (0.0056)***	-.1107 (0.0087)***	-.0746 (0.0056)***	-.0863 (0.0088)***
Work Exp.	0.0526 (0.0002)***	0.0527 (0.0002)***	0.0526 (0.0002)***	0.0527 (0.0002)***		
Work Exp. Square (/100)	-.0898 (0.0005)***	-.0899 (0.0005)***	-.0898 (0.0005)***	-.0900 (0.0005)***		
Work Exp. - CAN					0.0526 (0.0002)***	0.0526 (0.0002)***
Work Exp. Square (/100) - CAN					-.0911 (0.0005)***	-.0911 (0.0005)***
Work Exp. - FOR					0.004 (0.0019)**	0.0108 (0.002)***
Work Exp. Square (/100) - FOR					0.0265 (0.0203)	-.0388 (0.0205)*
Gender	0.287 (0.0011)***	0.2869 (0.0011)***	0.2876 (0.0011)***	0.287 (0.0011)***	0.2875 (0.0011)***	0.287 (0.0011)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes	Yes	Yes
CMA/Province F.E. (Ontario - Toronto)	Yes	Yes	Yes	Yes	Yes	Yes
Country/area of Orig. F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Group Loc. of study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R ²	0.2455	0.2468	0.2462	0.247	0.2467	0.2473
Country/area Weighted Ave.	-.1540 (0.0026)***	-.1007 (0.0030)***	-.1240 (0.0028)***	-.1031 (0.0030)***	-.0836 (0.0042)***	-.0734 (0.0042)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the groups of location of study is “Canada”. The mother tongue fixed effects incorporates a dummy for English mother tongue and a dummy for French Mother tongue. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is “Canada”.

Table 25: Immigrant Wage Gap by Country of Origin - Educational Group Dummies (Immigrants between 20 and 29)

	(1)	(2)	(3)	(4)	(5)	(6)
Below Bachelor	0.1457 (0.0014)***	0.146 (0.0014)***	0.1469 (0.0014)***	0.1469 (0.0014)***	0.1466 (0.0014)***	0.146 (0.0014)***
Bachelor	0.4112 (0.0017)***	0.4128 (0.0017)***	0.4181 (0.0017)***	0.418 (0.0017)***	0.4174 (0.0017)***	0.4167 (0.0017)***
Above Bachelor	0.5548 (0.0022)***	0.5546 (0.0022)***	0.5622 (0.0023)***	0.5614 (0.0023)***	0.5615 (0.0023)***	0.5598 (0.0023)***
Below Bachelor - FOR			-.0414 (0.0051)***	-.0443 (0.0082)***	-.0419 (0.0051)***	-.0258 (0.0082)***
Bachelor - FOR			-.1128 (0.0056)***	-.1165 (0.0086)***	-.0976 (0.0056)***	-.0824 (0.0087)***
Above Bachelor - FOR			-.0711 (0.0057)***	-.1085 (0.0089)***	-.0694 (0.0057)***	-.0843 (0.009)***
Work Exp.	0.0527 (0.0002)***	0.0527 (0.0002)***	0.0527 (0.0002)***	0.0527 (0.0002)***		
Work Exp. Square (/100)	-.0900 (0.0005)***	-.0899 (0.0005)***	-.0899 (0.0005)***	-.0901 (0.0005)***		
Work Exp. - CAN					0.0526 (0.0002)***	0.0525 (0.0002)***
Work Exp. Square (/100) - CAN					-.0910 (0.0005)***	-.0910 (0.0005)***
Work Exp. - FOR					0.0122 (0.0028)***	0.0125 (0.0028)***
Work Exp. Square (/100) - FOR					-.0349 (0.0257)	-.0518 (0.0256)**
Gender	0.2885 (0.0011)***	0.2884 (0.0011)***	0.289 (0.0011)***	0.2885 (0.0011)***	0.289 (0.0011)***	0.2885 (0.0011)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes	Yes	Yes
CMA/Province F.E. (Ontario - Toronto)	Yes	Yes	Yes	Yes	Yes	Yes
Country/area of Orig. F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Group Loc. of study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6193890	6193890	6193890	6193890	6193890	6193890
R ²	0.2467	0.2475	0.2472	0.2478	0.2474	0.248
Country/area Weighted Ave.	-.1740 (0.0028)***	-.1152 (0.0034)***	-.1433338 (0.0032)***	-.1182 (0.0034)***	-.1106 (0.0075)***	-.0793 (0.0076)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the groups of location of study is “Canada”. The mother tongue fixed effects incorporates a dummy for English mother tongue and a dummy for French Mother tongue. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is “Canada”.

Table 26: Friedberg: Immigrant Wage Gap by Country of Origin - Educational Group Dummies

	(1)	(2)	(3)	(4)	(5)	(6)
Below Bachelor	0.1452 (0.0014)***	0.1448 (0.0014)***	0.1489 (0.0014)***	0.1467 (0.0015)***	0.1457 (0.0014)***	0.1453 (0.0015)***
Bachelor	0.4108 (0.0017)***	0.4103 (0.0017)***	0.4204 (0.0017)***	0.4179 (0.0017)***	0.4158 (0.0017)***	0.4153 (0.0017)***
Above Bachelor	0.5535 (0.0022)***	0.553 (0.0022)***	0.5617 (0.0023)***	0.5595 (0.0023)***	0.5578 (0.0023)***	0.5576 (0.0023)***
Friedberg: Below Bachelor - FOR			-0.0663 (0.0046)***	-0.0353 (0.0058)***	-0.0252 (0.0052)***	-0.0187 (0.0059)***
Friedberg: Bachelor - FOR			-0.1460 (0.0056)***	-0.1091 (0.0067)***	-0.0807 (0.0063)***	-0.0706 (0.0069)***
Friedberg: Above Bachelor - FOR			-0.1209 (0.0068)***	-0.0863 (0.0078)***	-0.0781 (0.0073)***	-0.0693 (0.0081)***
Work Exp.	0.0526 (0.0002)***	0.0528 (0.0002)***	0.0528 (0.0002)***	0.0528 (0.0002)***		
Work Exp. Square (/100)	-0.0898 (0.0005)***	-0.0900 (0.0005)***	-0.0900 (0.0005)***	-0.0902 (0.0005)***		
Friedberg: Work Exp. - CAN					0.053 (0.0002)***	0.053 (0.0002)***
Friedberg: Work Exp. Square (/100) - CAN					-0.0918 (0.0005)***	-0.0918 (0.0005)***
Friedberg: Work Exp. - FOR					0.0008 (0.0024)	0.0026 (0.0027)
Friedberg: Work Exp. Square (/100) - FOR					0.019 (0.0282)	0.0073 (0.0299)
Gender	0.287 (0.0011)***	0.2868 (0.0011)***	0.2874 (0.0011)***	0.2872 (0.0011)***	0.2874 (0.0011)***	0.2873 (0.0011)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes	Yes	Yes
CMA/Province F.E. (Ontario - Toronto)	Yes	Yes	Yes	Yes	Yes	Yes
Country/area of Orig. F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Friedberg: Group Loc. of study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2455	0.2461	0.2462	0.2464	0.2469	0.247
Country/area Weighted Ave.	-0.1540 (0.0026)***	-0.0747 (0.0043)***	-0.0917 (0.0035)***	-0.0740 (0.0043)***	-0.0753 (0.0038)***	-0.0730 (0.0043)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the groups of location of study is “Canada”. The mother tongue fixed effects incorporates a dummy for English mother tongue and a dummy for French Mother tongue. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is “Canada”.

Table 27: Friedberg: Immigrant Wage Gap by Country of Origin - Educational Group Dummies (Immigrants between 20 and 29)

	(1)	(2)	(3)	(4)	(5)	(6)
Below Bachelor	0.1457 (0.0014)***	0.1457 (0.0014)***	0.148 (0.0015)***	0.1471 (0.0015)***	0.1459 (0.0015)***	0.1457 (0.0015)***
Bachelor	0.4112 (0.0017)***	0.4105 (0.0017)***	0.419 (0.0017)***	0.4177 (0.0017)***	0.4154 (0.0017)***	0.415 (0.0017)***
Above Bachelor	0.5548 (0.0022)***	0.553 (0.0022)***	0.5607 (0.0023)***	0.559 (0.0023)***	0.5574 (0.0023)***	0.5571 (0.0023)***
Friedberg: Below Bachelor - FOR			-.0470 (0.0056)***	-.0327 (0.006)***	-.0231 (0.0056)***	-.0189 (0.0061)***
Friedberg: Bachelor - FOR			-.1220 (0.0065)***	-.1056 (0.0069)***	-.0758 (0.0067)***	-.0708 (0.0071)***
Friedberg: Above Bachelor - FOR			-.0978 (0.0075)***	-.0815 (0.0079)***	-.0735 (0.0078)***	-.0683 (0.0083)***
Work Exp.	0.0527 (0.0002)***	0.0528 (0.0002)***	0.0528 (0.0002)***	0.0528 (0.0002)***		
Work Exp. Square (/100)	-.0900 (0.0005)***	-.0900 (0.0005)***	-.0901 (0.0005)***	-.0901 (0.0005)***		
Friedberg: Work Exp. - CAN					0.053 (0.0002)***	0.053 (0.0002)***
Friedberg: Work Exp. Square (/100) - CAN					-.0918 (0.0005)***	-.0918 (0.0005)***
Friedberg: Work Exp. - FOR					0.0012 (0.0026)	0.0028 (0.0028)
Friedberg: Work Exp. Square (/100) - FOR					0.0166 (0.0294)	0.0047 (0.0305)
Gender	0.2885 (0.0011)***	0.2884 (0.0011)***	0.2888 (0.0011)***	0.2887 (0.0011)***	0.2888 (0.0011)***	0.2888 (0.0011)***
Eng. or Fren. Mother Tongue	Yes	Yes	Yes	Yes	Yes	Yes
CMA/Province F.E. (Ontario - Toronto)	Yes	Yes	Yes	Yes	Yes	Yes
Country/area of Orig. F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Friedberg: Group Loc. of study F.E.	No	Yes	No	Yes	No	Yes
Obs.	6193890	6193890	6193890	6193890	6193890	6193890
R^2	0.2467	0.2468	0.247	0.2471	0.2476	0.2477
Country/area Weighted Ave.	-.1740 (0.0028)***	-.0659 (0.0094)***	-.1129 (0.0047)***	-.0685 (0.0094)***	-.0803 (0.0060)***	-.0661 (0.0094)***

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted category in the groups of location of study is “Canada”. The mother tongue fixed effects incorporates a dummy for English mother tongue and a dummy for French Mother tongue. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is “Canada”.

Table 28: Exploring the Effect of Field of Study

	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant	-0.1379 (0.0025)***	-0.1533 (0.0025)***	-0.0846 (0.0041)***	-0.0969 (0.0041)***	-0.0756 (0.0041)***	-0.0888 (0.0041)***
Below Bachelor	0.1451 (0.0014)***	0.1682 (0.0015)***	0.1449 (0.0014)***	0.1678 (0.0015)***	0.146 (0.0014)***	0.168 (0.0015)***
Bachelor	0.4097 (0.0017)***	0.4702 (0.0019)***	0.4111 (0.0017)***	0.4721 (0.0019)***	0.4185 (0.0017)***	0.481 (0.002)***
Above Bachelor	0.5527 (0.0022)***	0.613 (0.0024)***	0.5542 (0.0022)***	0.6153 (0.0024)***	0.5627 (0.0023)***	0.6239 (0.0025)***
Below Bachelor - FOR					-0.0376 (0.005)***	-0.0176 (0.005)***
Bachelor - FOR					-0.1171 (0.0054)***	-0.1302 (0.0053)***
Above Bachelor - FOR					-0.0770 (0.0056)***	-0.0738 (0.0055)***
Work Exp.	0.0524 (0.0002)***	0.0518 (0.0002)***				
Work Exp. Square (/100)	-0.0885 (0.0005)***	-0.0876 (0.0005)***				
Work Exp. - CAN			0.0528 (0.0002)***	0.0524 (0.0002)***	0.0526 (0.0002)***	0.0522 (0.0002)***
Work Exp. Square (/100) - CAN			-0.0912 (0.0005)***	-0.0906 (0.0005)***	-0.0908 (0.0005)***	-0.0901 (0.0005)***
Work Exp. - FOR			-0.0056 (0.0019)***	-0.0088 (0.0019)***	0.006 (0.002)***	0.0024 (0.0019)
Work Exp. Square (/100) - FOR			0.1309 (0.0198)***	0.1646 (0.0196)***	0.0069 (0.0204)	0.0421 (0.0202)**
Gender	0.2871 (0.0011)***	0.2374 (0.0014)***	0.2873 (0.0011)***	0.2372 (0.0014)***	0.2877 (0.0011)***	0.2372 (0.0014)***
Mother Tongue - ENG	0.0787 (0.0023)***	0.0858 (0.0023)***	0.0676 (0.0023)***	0.0749 (0.0023)***	0.0646 (0.0023)***	0.0718 (0.0023)***
Mother Tongue - FREN	0.0963 (0.0029)***	0.0985 (0.0029)***	0.0866 (0.0029)***	0.0889 (0.0029)***	0.0842 (0.0029)***	0.0864 (0.0029)***
Prov + CMA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Country/area Fixed Effects	No	No	No	No	No	No
Field of Study Fixed Effects	No	Yes	No	Yes	No	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2434	0.2599	0.2448	0.2615	0.2454	0.2622

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category for country/area of origin fixed effect is "Canada". The base case for the field of study fixed effects is "Humanities and Visual Arts".

Table 29: Interacting Field of Study with Location of Study Groups

	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant						
Below Bachelor	0.145 (0.0014)***	0.1675 (0.0015)***	0.1452 (0.0014)***	0.1678 (0.0015)***	0.1674 (0.0015)***	0.1674 (0.0015)***
Bachelor	0.4116 (0.0017)***	0.4729 (0.0019)***	0.4133 (0.0017)***	0.4743 (0.0019)***	0.4736 (0.002)***	0.4736 (0.002)***
Above Bachelor	0.5538 (0.0022)***	0.6149 (0.0024)***	0.5544 (0.0022)***	0.6146 (0.0025)***	0.614 (0.0025)***	0.6138 (0.0025)***
Work Exp. - CAN	0.0527 (0.0002)***	0.0523 (0.0002)***	0.0526 (0.0002)***	0.0522 (0.0002)***	0.0522 (0.0002)***	0.0521 (0.0002)***
Work Exp. Square (/100) - CAN	-.0914 (0.0005)***	-.0907 (0.0005)***	-.0911 (0.0005)***	-.0905 (0.0005)***	-.0905 (0.0005)***	-.0905 (0.0005)***
Work Exp. - FOR	-.0059 (0.0019)***	-.0088 (0.0019)***	0.0105 (0.002)***	0.0064 (0.002)***	0.0069 (0.002)***	0.0072 (0.002)***
Work Exp. Square (/100) - FOR	0.1316 (0.0198)***	0.1644 (0.0196)***	-.0245 (0.0204)	0.0198 (0.0203)	0.014 (0.0203)	0.0122 (0.0203)
Gender	0.2871 (0.0011)***	0.2371 (0.0014)***	0.2869 (0.0011)***	0.2367 (0.0014)***	0.2364 (0.0014)***	0.2364 (0.0014)***
Mother Tongue - ENG	0.0521 (0.0025)***	0.0551 (0.0025)***	0.0496 (0.0025)***	0.0528 (0.0025)***	0.0529 (0.0025)***	0.0512 (0.0025)***
Mother Tongue - FREN	0.073 (0.003)***	0.0716 (0.003)***	0.071 (0.003)***	0.0697 (0.003)***	0.0696 (0.003)***	0.0678 (0.003)***
Prov + CMA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Country/area Fixed Effects	Yes	Yes	Yes	Yes	Yes	No
Adding African countries F.E.	No	No	No	No	No	Yes
GROUP Location of Study	No	No	Yes	Yes	No	No
Field of Study Fixed Effects	No	Yes	No	Yes	Yes	Yes
Interaction: Group Location & Field	No	No	No	No	Yes	Yes
Obs.	6323125	6323125	6323125	6323125	6323125	6323125
R^2	0.2462	0.2631	0.2471	0.2639	0.2645	0.2646

Note: Robust standard errors are in parenthesis. *, ** and *** denote significance at 10%, 5% and 1% levels respectively. The omitted categories in the CMA and Province fixed effects are Toronto and Ontario, respectively. The omitted category in the groups of location of study is "Canada". The omitted category for country/area of origin fixed effect is "Eastern Europe". The base case for the field of study fixed effects is "Humanities and Visual Arts". The interactions are between the groups of locations of study (excluding Canada) and the eleven fields of study (excluding "Humanities and Visual Arts").

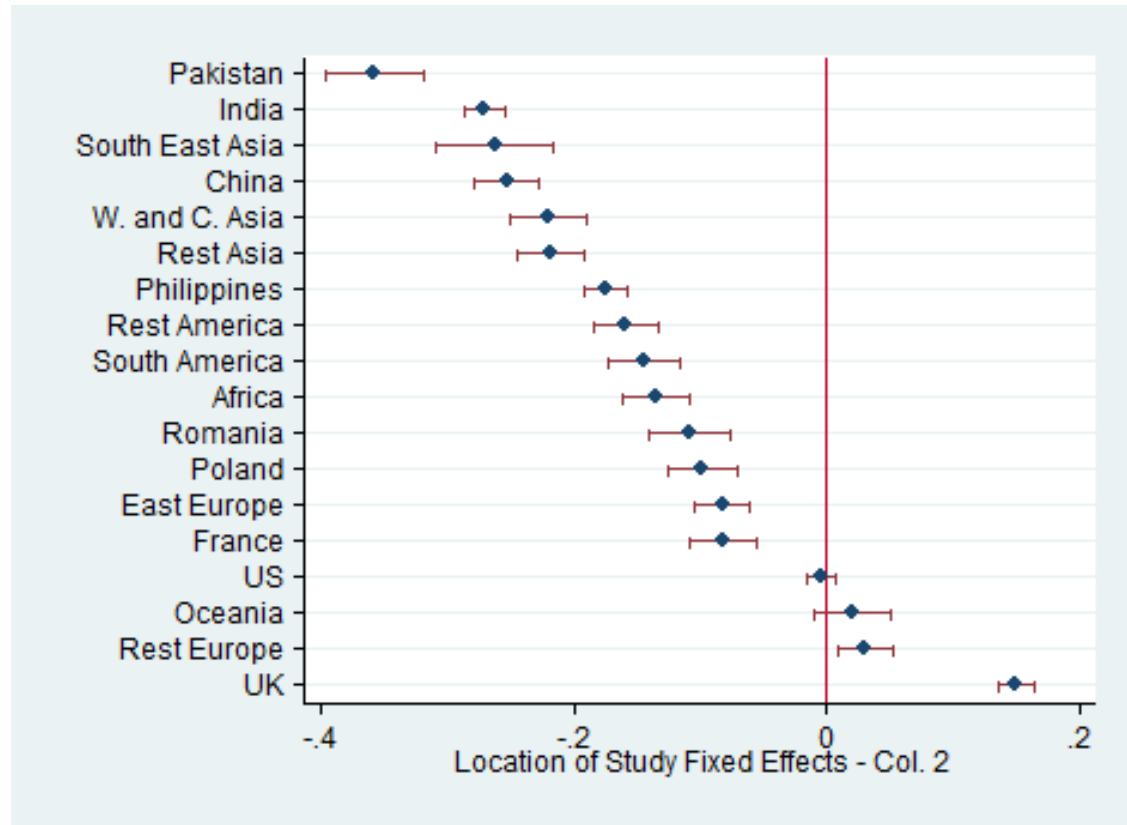


Figure 1: Location of Study Fixed Effects Table 10 Column 2

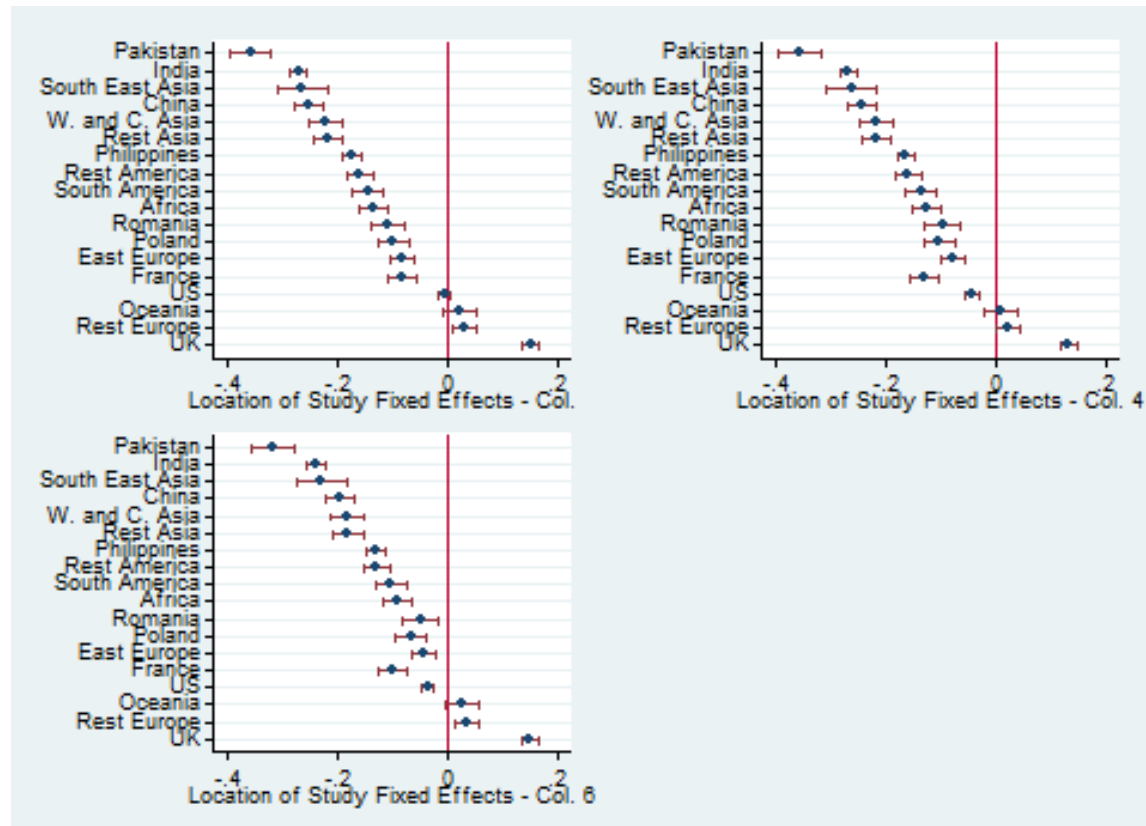


Figure 2: Location of Study Fixed Effects - Table 10 Columns 2,4 and 6



Figure 3: Country of Origin Fixed Effects Table 21 Columns 1 and 2

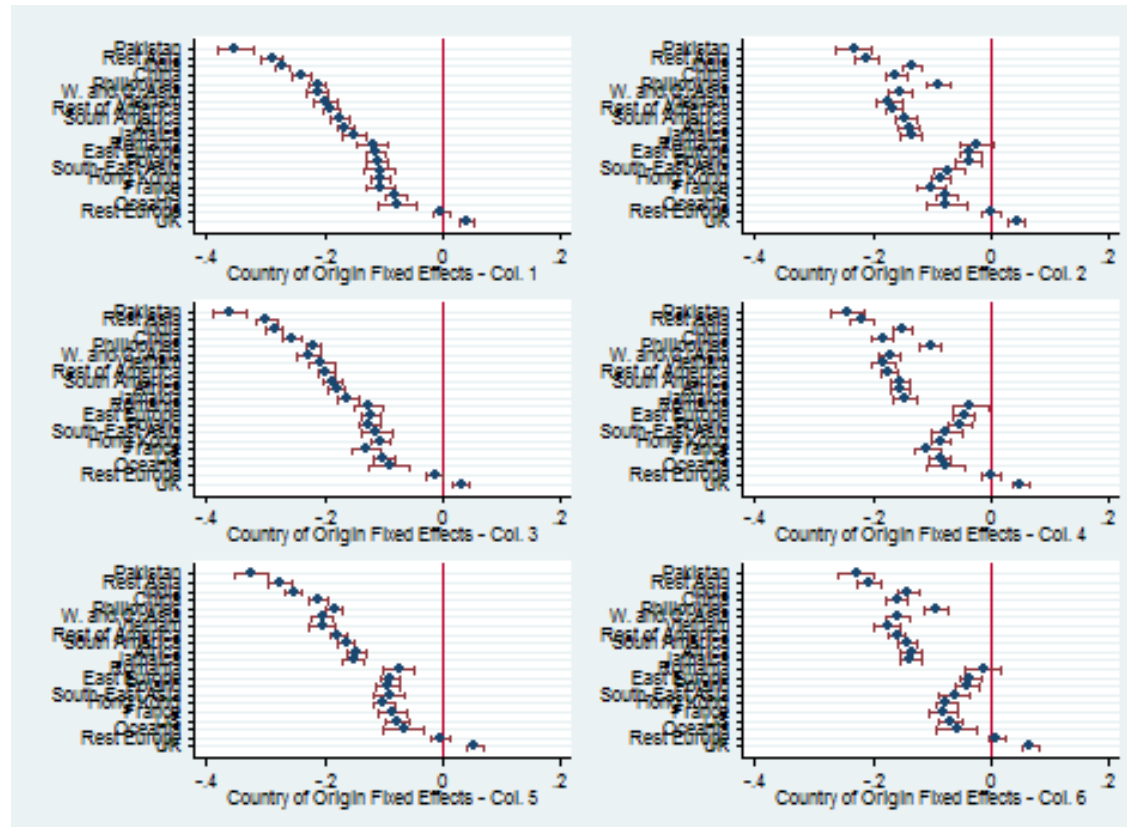


Figure 4: Country of Origin Fixed Effects Table 21 adding groups of location of study Fixed Effects

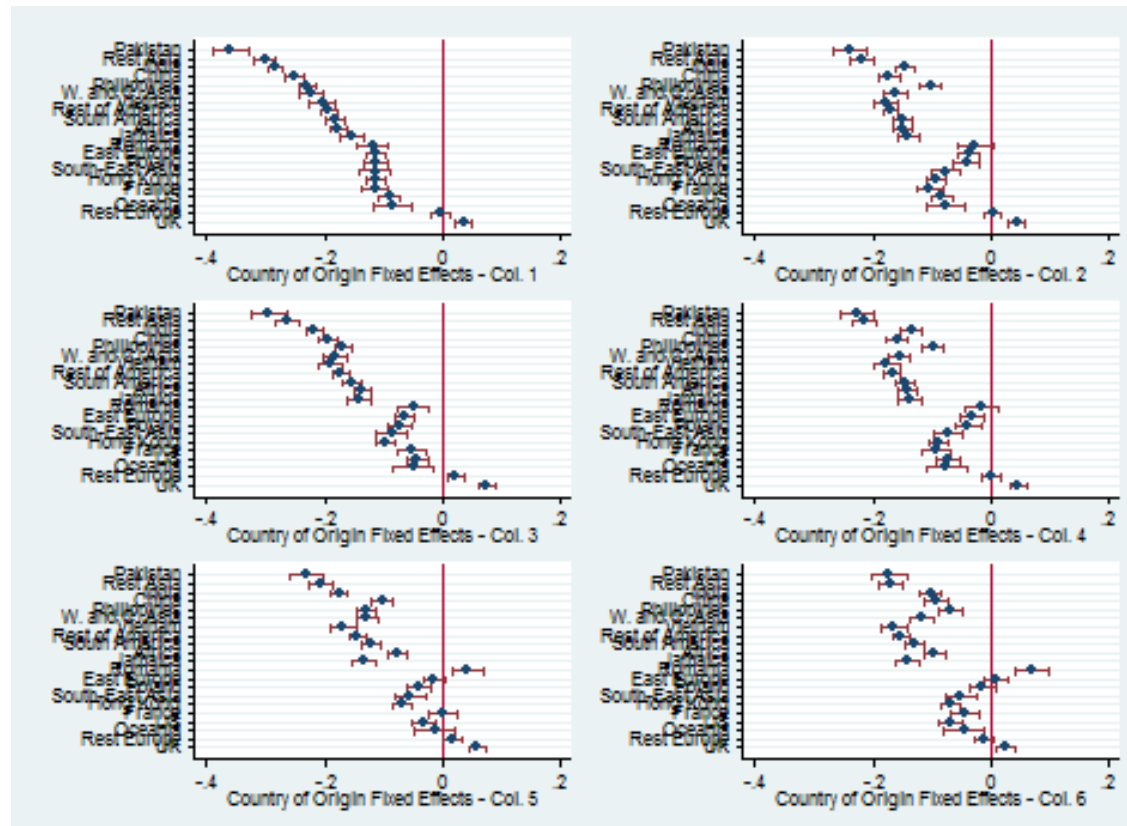


Figure 5: Country of Origin Fixed Effects Table 23

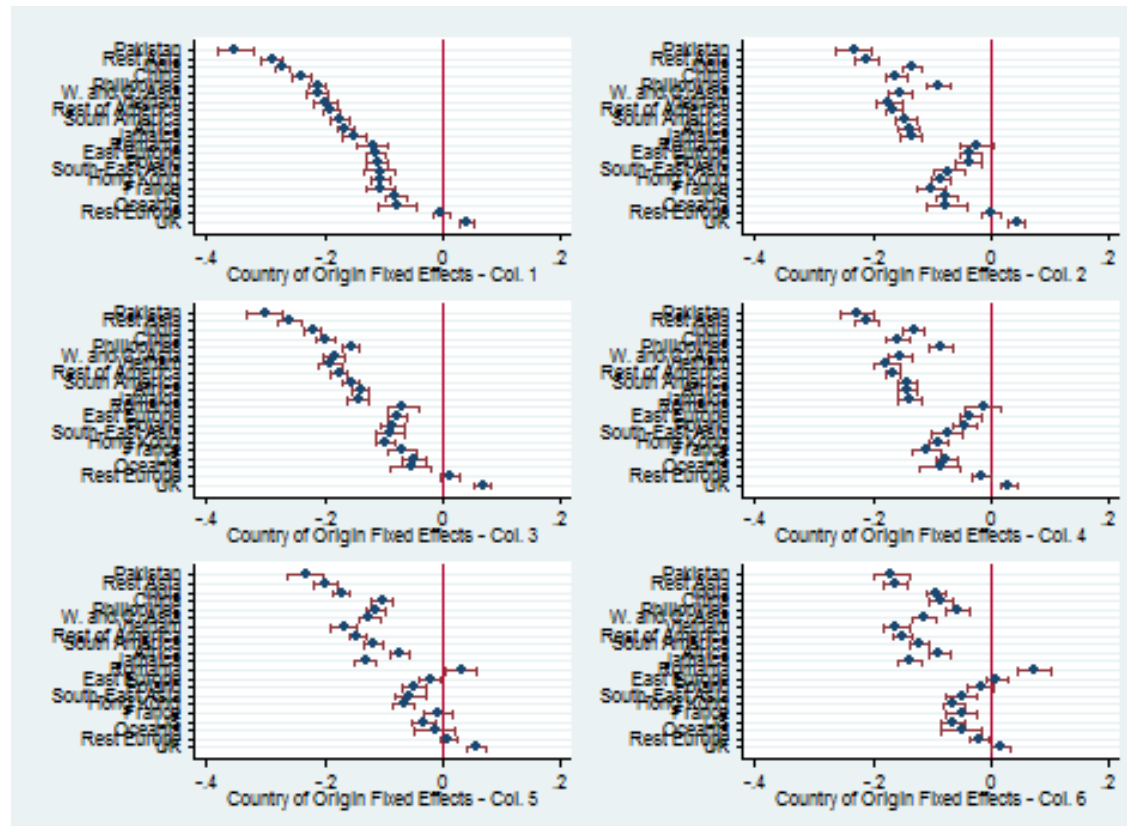


Figure 6: Country of Origin Fixed Effects Table 24

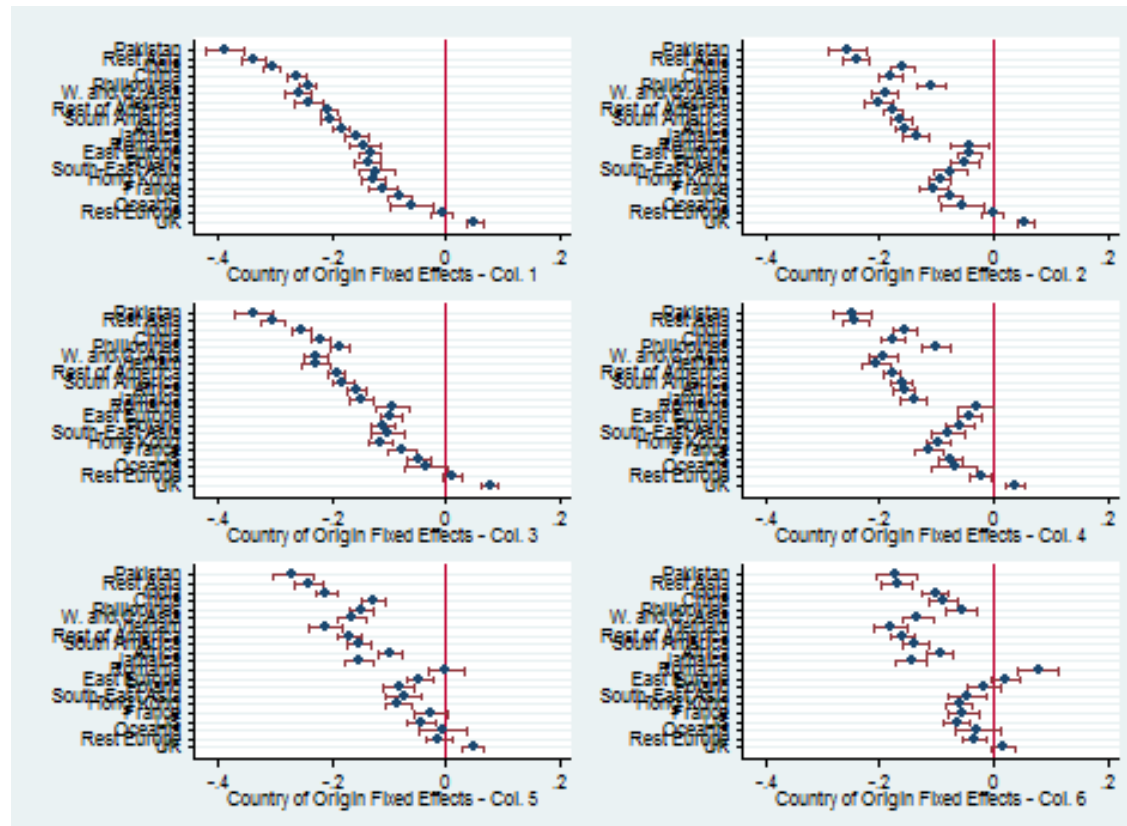


Figure 7: Country of Origin Fixed Effects Table 25 - Immigrants between 20 and 29

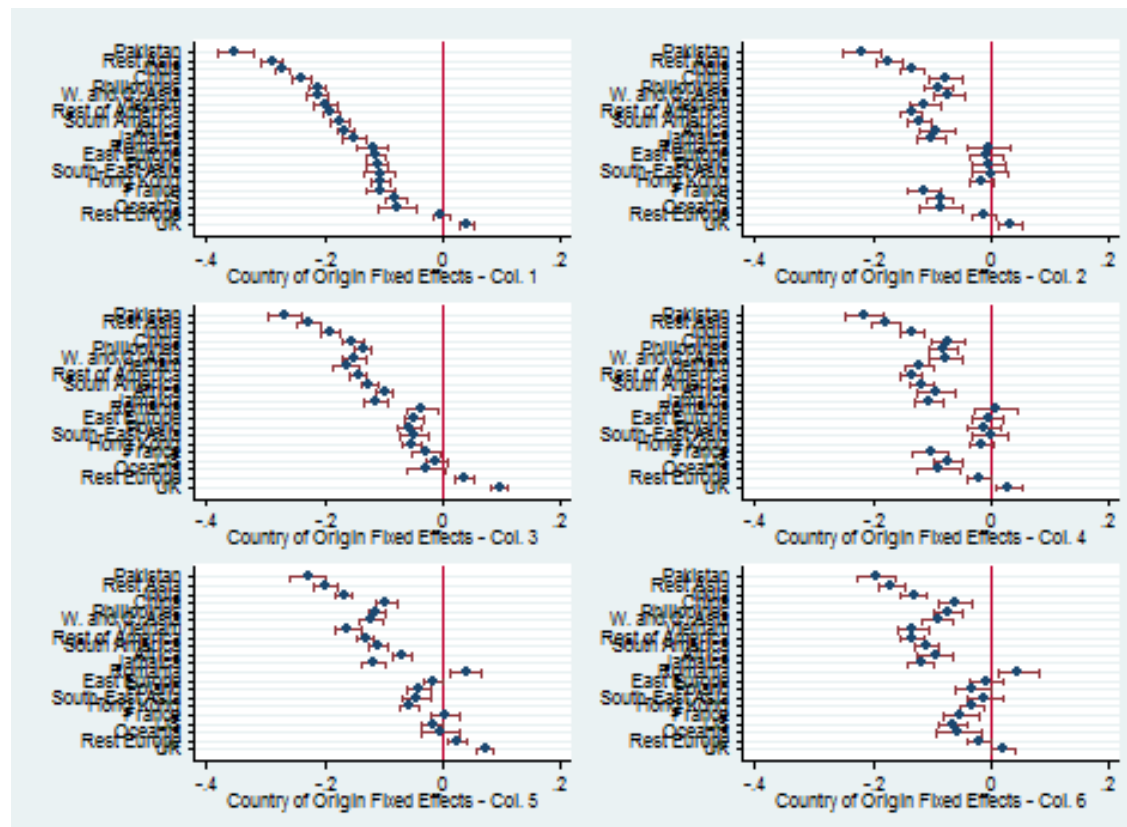


Figure 8: Friedberg: Country of Origin Fixed Effects Table 26

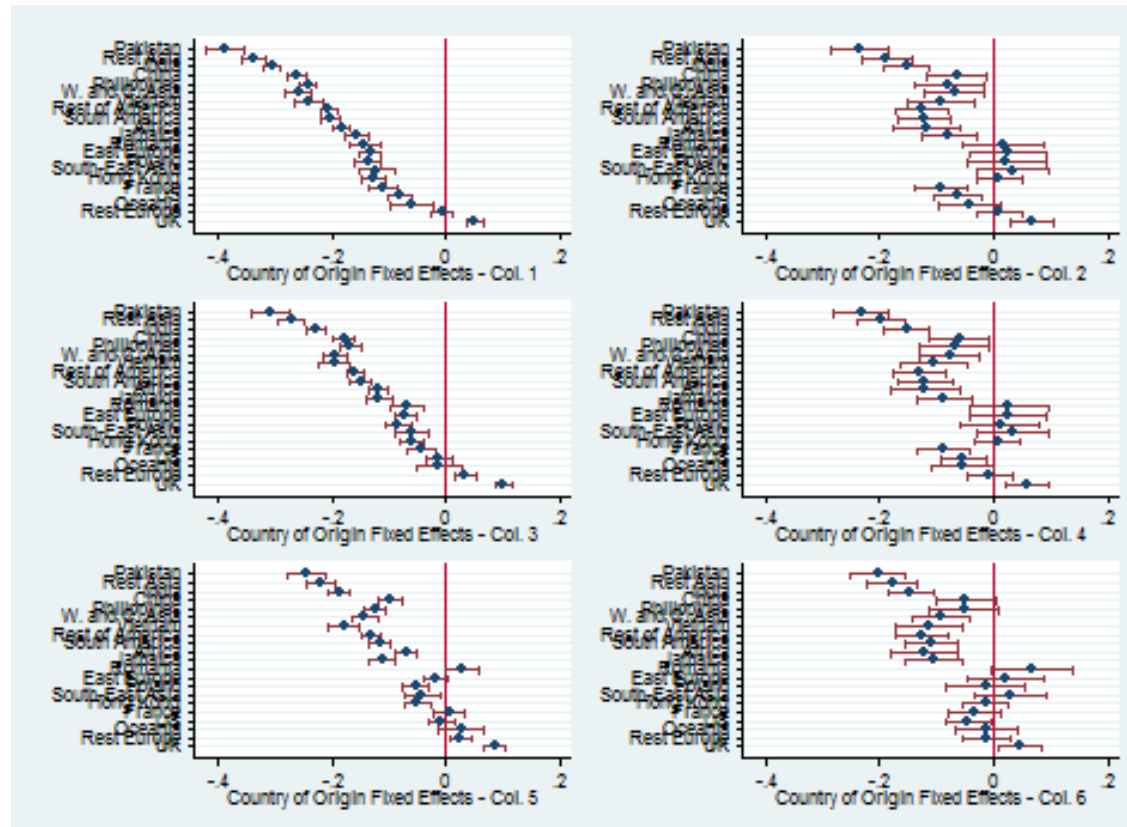


Figure 9: Friedberg: Country of Origin Fixed Effects Table 27 - Immigrants between 20 and 29

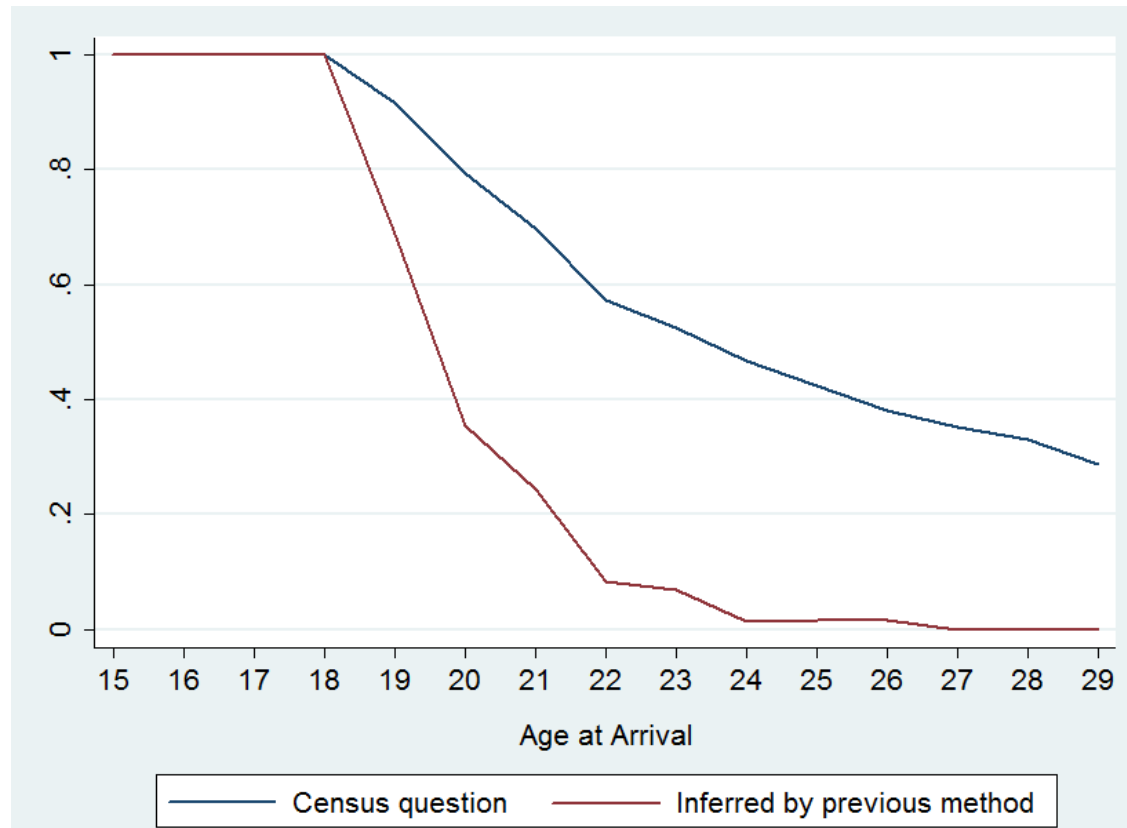


Figure 10: Share of Immigrants with a Canadian degree by age at immigration

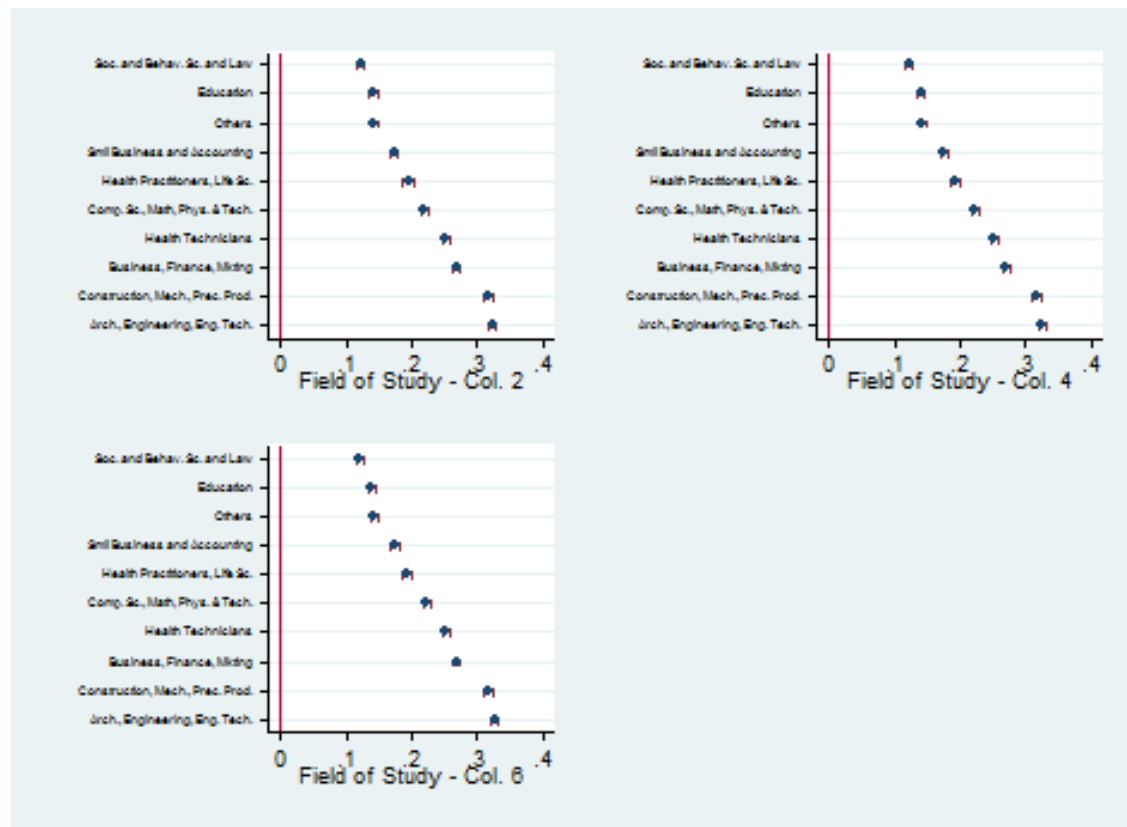


Figure 11: Field of Study Fixed Effects Table 28

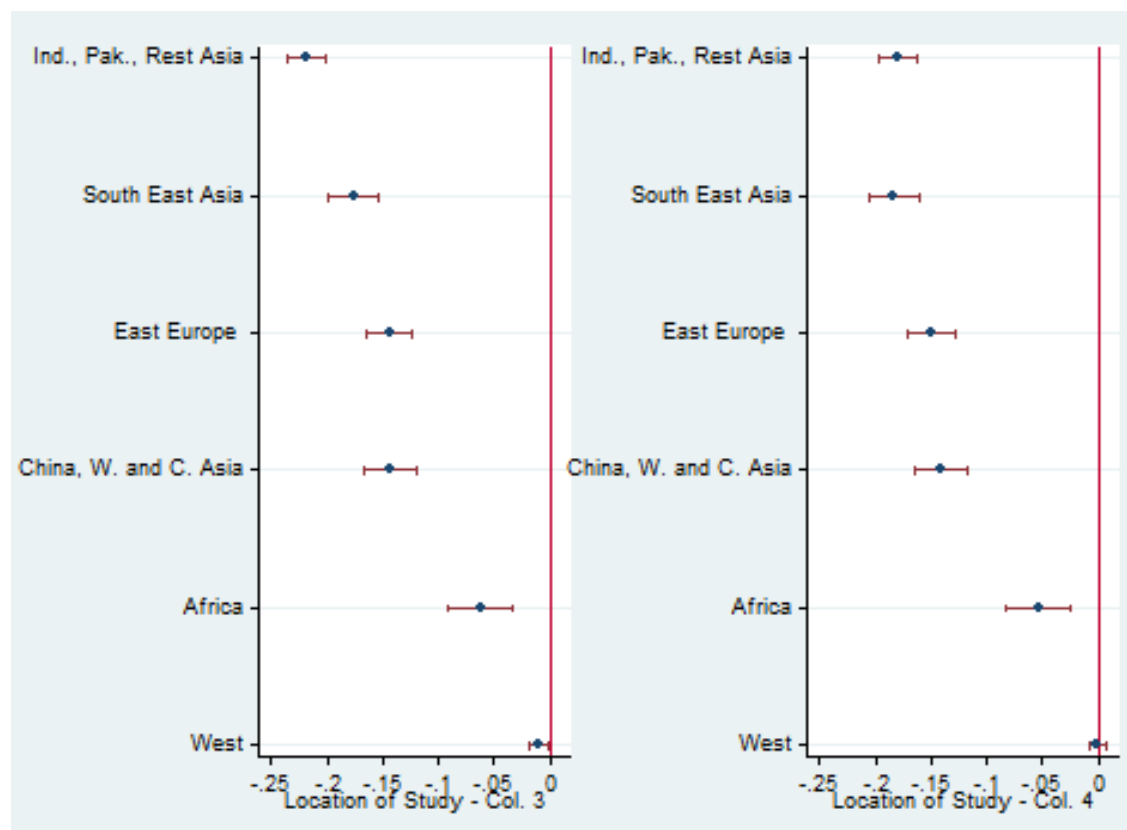


Figure 12: Location of Study table 29

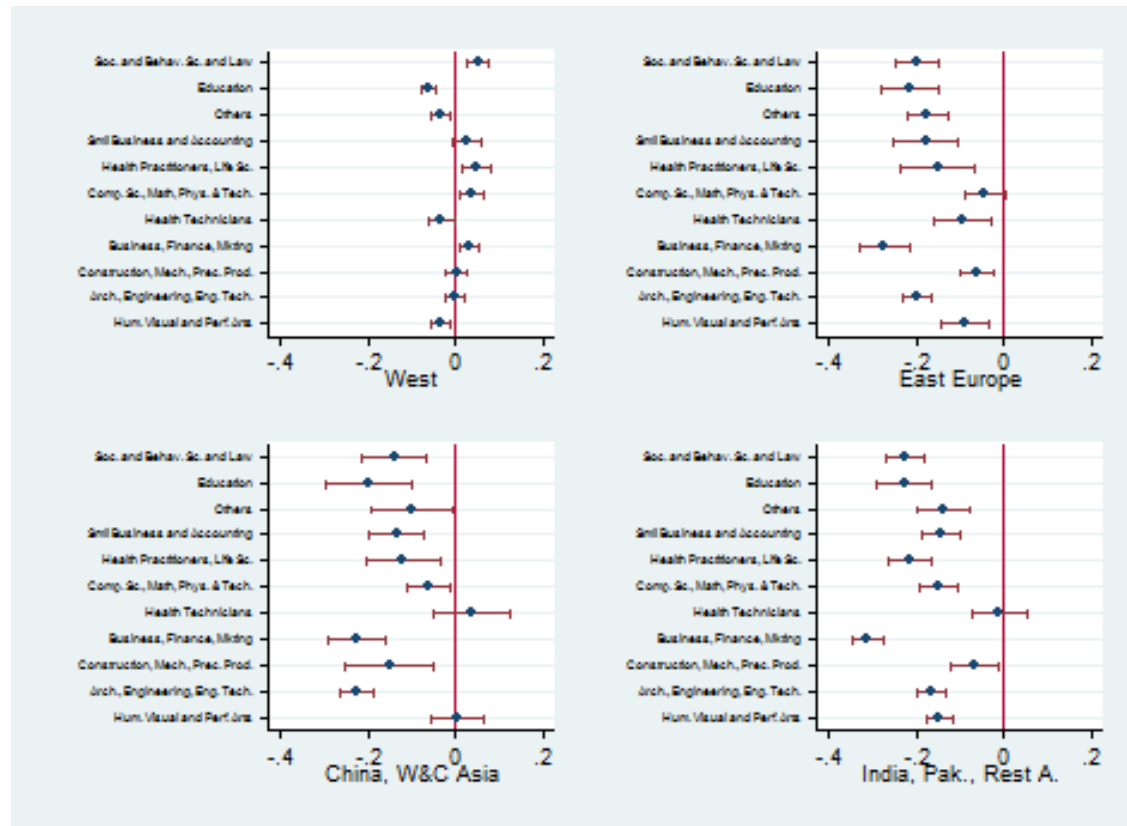


Figure 13: Interaction: Location + Field of Study Table 29 - Part 1

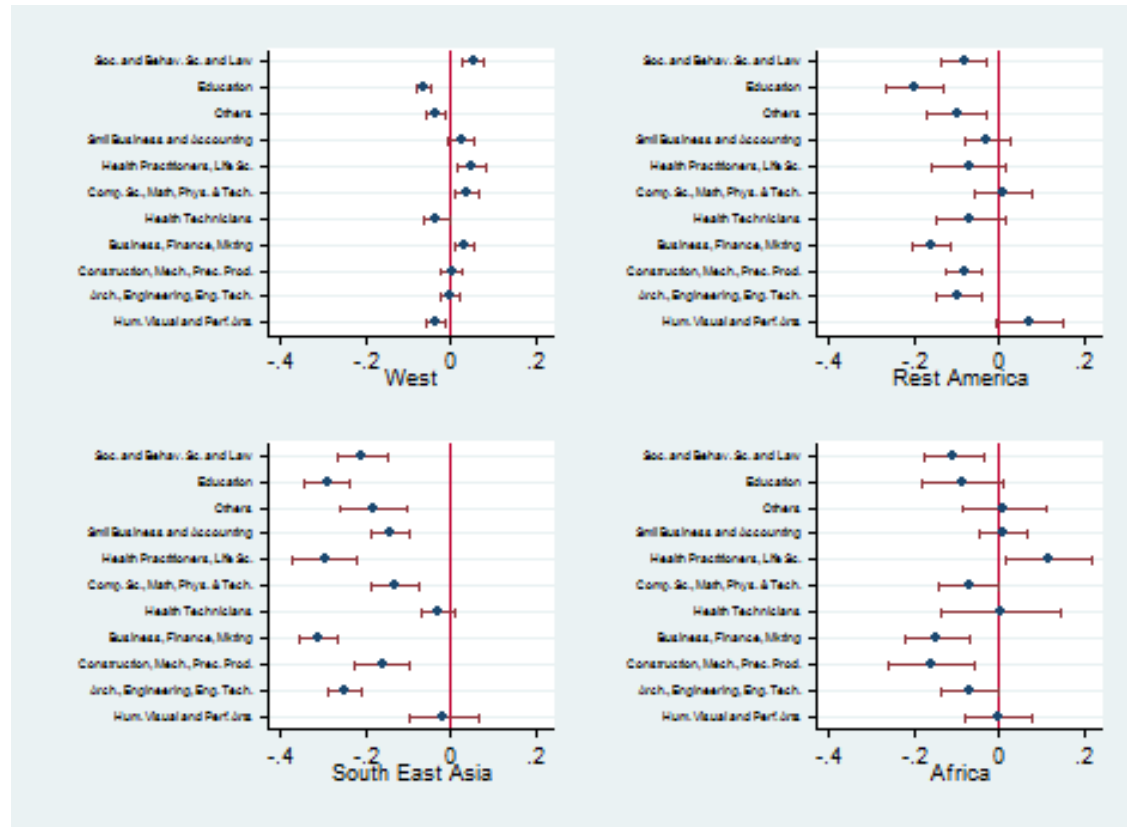


Figure 14: Interaction: Location + Field of Study Table 29- Part 2

A Minimum Hourly Wage by Province

Province	Minimum Wage	Effective Date
Alberta	7.00	September 2005
British Columbia	8.00	November 2001
Manitoba	7.25	April 2005
New Brunswick	6.30	January 2005
Newfoundland and Labrador	6.25	June 2005
Northwest Territories	8.25	December 2003
Nova Scotia	6.80	October 2005
Nunavut	8.50	March 2003
Ontario	7.45	February 2005
Prince Edward Island	6.80	January 2005
Quebec	7.60	May 2005
Saskatchewan	7.05	September 2005
Yukon	7.20	October 1998

B Sample Restrictions

Major Restrictions

- 1 Age between 20 and 64 years old
- 2 Education level higher than high school
- 3 Wage income for 2005 higher than zero but lower than 8888888
- 4 Number of weeks worked in 2005 higher (or equal) than one and smaller than 52
- 5 Full-time workers only
- 6 No non-permanent residents
- 7 Immigrants age at arrival has to be between 15 and 29 years old.
- 8 Weekly wage higher than 15 times the provincial minimum hourly wage.

Secondary Restrictions

- 9 Canadian-born should have missing values for "age at immigration"
- 10 Location of study clearly identified (drop if location of study="Outside Canada" or "Distance learning")
- 11 Country of origin clearly specified (drop if country of origin = "Other")
- 12 Drop if years of education plus 6 is greater than age
- 13 Drop if years of education plus 6 is greater than age at arrival for immigrants with their highest degree obtained abroad

Inconsistencies Checks

- 14 Drop observations if logarithm of the weekly wages is less or equal to zero
 - 15 Year of immigration must be a non-missing value for immigrants
-

C Years of Education by Highest Degree Attained

Highest Degree Achieved	Years of Education Assigned
Other trades certificate or diploma	13
Registered apprenticeship certificate	13
College, CEGEP or other non-university certificate (3 to 12 months)	13
College, CEGEP or other non-university certificate (13 to 24 months)	14
College, CEGEP or other non-university certificate (more than 2 years)	14
University certificate or diploma below bachelor level	15
Bachelor's degree	16
University certificate or diploma above bachelor level	17
Degree in medicine, dentistry, veterinary or optometry	18
Master's Degree	18
Earned doctorate degree	21

D Region of Origin and Location of Study

Location of Study		Country of Origin		Groupings Location of Study	
1	Canada	1	Canada	1	Canada
2	USA	2	US	2	US, UK, France, Oceania and rest of Europe
3	South America	3	Jamaica	3	East Europe, Romania and Poland
4	Rest of America	4	South America	4	West and Central Asia and China
5	UK	5	Rest of America	5	India, Pakistan and the rest of Asia
6	France	6	UK	6	South America and the rest of America
7	Poland	7	France	7	Philippines and South-East Asia
8	Romania	8	Poland	8	Africa
9	East Europe	9	Romania		
10	Rest Europe	10	East Europe		
11	Africa	11	Rest Europe		
12	Western and Central Asia	12	Africa		
13	China	13	Western and Central Asia		
14	Phillipines	14	China		
15	India	15	Hong Kong		
16	Pakistan	16	Phillipines		
17	South East Asia	17	Vietnam		
18	Rest Asia	18	India		
19	Oceania	19	Pakistan		
		20	South East Asia		
		21	Rest Asia		
		22	Oceania		

E Fields of Study

We combine the thirteen categories specified by the Classification of Instructional Programs (CIP - Canada 2000) into eleven more homogenous groups. The biggest changes were the reordering of programs related to three CIP categories: “Business, Management and Public Administration”, “Architecture, Engineering, and Related Technologies” and “Health, Parks, Recreation and Fitness”.

We divide “Business, Management and Public Administration” into two groups. One related to management and the other one related to accounting and business support. With the “Architecture, Engineering, and Related Technologies” category we separate the core programs related to architecture and engineering from programs related to construction trades and mechanic and repair technologies. Finally, we split the programs of the “Health, Parks, Recreation and Fitness” category into three groups. One group related to health practitioners, one related to health assistance and one related to other fields.

Field of Study	Classification of Instructional Programs (CIP)	
Education	13	Education
	16	Aboriginal and Foreign Languages, Literatures and Linguistics
Humanities & Visual and Performing Arts	23	English Language and Literature/Letters
	24	Liberal Arts and Sciences, General Studies and Humanities
	30.13	Medieval and Renaissance Studies
	30.21	Holocaust and Related Studies
	30.22	Classical and Ancient Studies
	38	Philosophy and Religious Studies
	39	Theology and Religious Vocations
	50	Visual and Performing Arts
	54	History
	55	French Language and Literature/Letters
	Social and Behavioural Sciences and Law	5
9		Communication, Journalism and Related Programs
19		Family and Consumer Sciences/Human Sciences
22		Legal Professions and Studies
30.05		Peace Studies and Conflict Resolution
30.1		Biopsychology
30.11		Gerontology
30.12		Historic Preservation and Conservation
30.14		Museology/Museum Studies
30.15		Science, Technology and Society
30.17		Behavioural Sciences
30.2		International/Global Studies
30.23		Intercultural/Multicultural and Diversity Studies
30.25		Cognitive Science
30.99		Multidisciplinary/Interdisciplinary Studies, Other
Business, Finance and Marketing	42	Psychology
	45	Social Sciences
	52.01	Business/Commerce, General
	52.02	Business Administration, Management and Operations
	52.05	Business/Corporate Communications
	52.06	Business/Managerial Economics
	52.08	Finance and Financial Management Services
	52.09	Hospitality Administration/Management
	52.1	Human Resources Management and Services
	52.11	International Business/Trade/Commerce
	52.12	Management Information Systems and Services
	52.13	Management Sciences and Quantitative Methods
	52.14	Marketing
	52.15	Real Estate
	52.16	Taxation
	52.17	Insurance
	52.2	Construction Management

Field of Study	Classification of Instructional Programs (CIP)	
Small Businesses, Accounting, and Business Support	30.16	Accounting and Computer Science
	52.03	Accounting and Related Services
	52.04	Business Operations Support and Assistant Services
	52.07	Entrepreneurial and Small Business Operations
	52.18	General Sales, Merchandising and Related Marketing Operations
	52.19	Specialized Sales, Merchandising and Marketing Operations
	52.99	Business, Management, Marketing and Related Support Services, Other
Computer Sciences, Mathematics, Physical Sciences & Technologies	11	Computer and Information Sciences and Support Services
	27	Mathematics and Statistics
	40	Physical Sciences
	41	Science Technologies/Technicians
Architecture, Engineering & Engineering Technician	4	Architecture and Related Services
	14	Engineering
	15	Engineering Technologies/Technicians
Construction trade, Mechanics and Woodwork	46	Construction Trades
	47	Mechanic and Repair Technologies/Technicians
	48	Precision Production
Health Practitioners	26	Biological and Biomedical Sciences
	30.01	Biological and Physical Sciences
	30.18	Natural Sciences
	30.19	Nutrition Sciences
	30.24	Neuroscience
	51	Health Services/Allied Health/Health Sciences, General
	51.02	Communication Disorders Sciences and Services
	51.04	Dentistry (DDS, DMD)
	51.05	Advanced/Graduate Dentistry and Oral Sciences (Cert., MSc, PhD)
	51.12	Medicine (MD)
	51.14	Medical Scientist (MSc, PhD)
	51.15	Mental and Social Health Services and Allied Professions
	51.17	Optometry (OD)
	51.2	Pharmacy, Pharmaceutical Sciences and Administration
	51.21	Podiatric Medicine/Podiatry (DPM)
	51.22	Public Health
	51.24	Veterinary Medicine (DVM)
	51.25	Veterinary Biomedical and Clinical Sciences (Cert., MSc, PhD)
	51.31	Dietetics and Clinical Nutrition Services
	51.32	Bioethics/Medical Ethics
60	Dental, Medical and Veterinary Residency Programs	

Field of Study	Classification of Instructional Programs (CIP)
Health Assistance	51.01 Chiropractic (DC)
	51.06 Dental Support Services and Allied Professions
	51.07 Health and Medical Administrative Services
	51.08 Allied Health and Medical Assisting Services
	51.09 Allied Health Diagnostics, Intervention and Treatment Professions
	51.1 Clinical/Medical Laboratory Science and Allied Professions
	51.11 Health/Medical Preparatory Programs
	51.16 Nursing
	51.18 Ophthalmic and Optometric Support Services and Allied Professions
	51.19 Osteopathic Medicine/Osteopathy (DO)
	51.23 Rehabilitation and Therapeutic Professions
	51.26 Health Aides/Attendants/Orderlies
	51.27 Medical Illustration and Informatics
	51.33 Alternative and Complementary Medicine and Medical Systems
	51.34 Alternative and Complementary Medical Support Services
	51.35 Somatic Bodywork and Related Therapeutic Services
	51.36 Movement and Mind-Body Therapies
51.37 Energy-based and Biologically-based Therapies	
51.99 Health Professions and Related Clinical Sciences, Other	
Others	1 Agriculture, Agriculture Operations and Related Sciences
	3 Natural Resources and Conservation
	10 Communications Technologies/Technicians and Support Services
	12 Personal and Culinary Services
	28 Reserve Entry Scheme for Officers in the Armed Forces
	29 Military Technologies
	31 Parks, Recreation, Leisure and Fitness Studies
	44 Public Administration and Social Service Professions
49 Transportation and Materials Moving	