

**THE INFLUENCE OF SOURCE COUNTRY PRODUCTIVITY  
ON THE LABOUR MARKET OUTCOMES  
OF IMMIGRANTS IN CANADA**

by

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## Table of Contents

1. Introduction.....	2
2. Literature reviews.....	4
3. Data and Methodology .....	7
4. Empirical Results.....	11
4.1 Impact of GDP on earnings and employment outcomes.....	13
4.2 Panel Data Estimates.....	21
4.3 Impact of foreign experience and schooling on earnings and employment outcomes.....	22
5. Conclusion.....	24
References.....	27
Appendix.....	30

## List of Tables

Table 1	Means.....	12
Table 2	Earnings and Employment outcomes for males and females .....	14
Table 3	Earnings and Employment outcomes for university graduates.....	16
Table 4	Earnings and Employment outcomes for immigrants with high school degree or less .....	16
Table 5	Earnings and Employment outcomes for immigrants with high English ability .....	17
Table 6	Earnings and Employment outcomes for immigrants with low English ability .....	17
Table 7	Earnings and Employment outcomes for immigrants from western countries.....	18
Table 8	Earnings and Employment outcomes from immigrants from non western countries .....	19
Table 9	Earnings and Employment outcomes for skilled worker principal applicants .....	20

Table 10	Earnings and Employment outcomes for family class of immigrants.....	20
Table 11	Random Effects Estimates of Source Country GDP and Fixed Effects Estimates of the interaction between Source Country GDP and Months since Migration.....	21
Table 12	The relationships between years of foreign school and years of foreign work experience and source country GDP on earnings and employment outcomes.....	23
Table A1a	Earnings and employment outcomes for males and females wave 1.....	30
Table A1b	Earnings and employment outcomes for males and females wave 2.....	32
Table A1c	Earnings and employment outcomes for males and females wave 3.....	34
Table A2	Random Effects Estimates of Source Country GDP and Fixed Effects Estimates of the interaction between Source Country GDP and Months since Migration.....	35

Abstract: This paper examines the correlation between the earnings of recently landed immigrants and the GDP per capita of their source country. Immigrants from developed countries are expected to supply human capital that is of higher quality than immigrants from less-developed countries. Thus the former group should have less trouble integrating into the Canadian labour force and should achieve higher earnings than the latter. The results suggest that there exists a positive correlation between the source country GDP per capita and earnings. The results also suggest that the magnitude of this correlation is higher for immigrants with higher English ability than immigrants with low English ability. We find that while returns to foreign work experience are negative overall, the returns to foreign work experience increase with source country GDP per capita for males. As well, the returns to schooling increase with source country GDP per capita for both males and females.

## 1. Introduction

Immigration is a major policy issue in many western countries. In Canada, much of the research in Economics has focused on the earning outcomes of immigrants. These studies reveal a decline in immigrants' entry earnings for most recent cohorts (Baker and Benjamin, 1994; Bloom, Grenier and Gunderson, 1995; Grant, 1999; and Frenette and Morissette, 2003; Warman and Worswick, 2004; Picot, Hou and Coulombe, 2007).<sup>1</sup> Indeed, these findings show that male newcomers in the 1970s, 1980s and in the first half of the 1990s, experienced lower entry earnings compared to their predecessors. Moreover, Aydemir (2003) argues that compared to the previous cohorts, immigrants participation in the Canadian labour market and rate of employment are declining. These results are alarming because immigrants constitute an increasing proportion of the Canadian workforce. Consequently, researchers and policy makers are interested in the reasons for these differences in earning outcomes between immigrants and Canadian-born workers and between different immigrant cohorts.

In order to provide an explanation for this change in immigrants' outcomes, Green and Worswick (2004) compared the entry earnings of Canadian-born men to immigrant men who entered the Canadian labour market at the same time. They found that both groups have experienced low entry earnings during the 1990s that could be attributed to the general performance of the Canadian economy. In addition, their results reveal a decrease in the returns to foreign work experience for the 1990s immigrant entry cohorts

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<sup>1</sup> Abbott and Beach (1993) also find that immigrants from the later 1960s cohort did worse than earlier cohorts.

compared to the 1980s immigrant entry cohorts. Aydemir and Skuterud (2005) obtained similar results using Canadian censuses from 1981 to 2001. Furthermore, their results suggest that the fall in earnings can also be attributed to the shift in immigration from western countries to Asian or African countries and the decrease in the knowledge of an official language by the recent cohorts. Finally, Pendakur and Pendakur (1998, 2002, 2007), who examine wage and earning differentials between different immigrant and ethnic groups, argue that discrimination could explain part of the earning differential.

Previous research provides a variety of potential explanations for the fall in the entry earnings of immigrants. However, one area that is starting to receive interest is the potential quality differences between the human capital of immigrants and native-born workers, as well as quality differences between different immigrant groups. While foreign trained immigrants may supply an equivalent quality of skills, given that there is a great amount of variance in the quality of human capital between countries, it is also very likely that foreign trained immigrants supply human capital that is of different quality. Foreign trained immigrants may supply a lower quality of human capital than the Canadian born or, potentially, they may supply an equivalent quality of skills but that these skills are not being recognized, either because Canadian employers will not recognize the credentials because of discrimination or because it is costly to examine the credentials. Another possibility is that immigrants supply the same quality of human capital but their skills are not as useful to the Canadian labour market due to differences between the source and host country economies.

This paper expands on previous research by examining the relationship between the entry labour market outcomes of immigrants and the economic performance of their

source country. The underlying hypothesis is that since GDP is directly related to the quality of the human capital of a country, immigrants from countries with lower GDP per capita are more likely to supply a lower quality of skills to the Canadian labour market. Employing a unique panel data set that follows the economic outcomes of recently landed immigrants the first four years after immigrating to Canada, we find that source country GDP has a positive relationship with earning outcomes in Canada, particularly for males. We also find that source country productivity is important in determining the returns to potential foreign work experience as well as the returns to schooling.

## **2. Literature reviews**

In recent years, more immigrants to Canada arrive from Asia and Africa as opposed to Central and Northern Europe and the United States. Immigrants receive lower returns for their foreign work experience and years of schooling (Schaafsma and Sweetman, 2001; Sweetman, 2004; Aydemir and Skuterud, 2005).<sup>2</sup> The lower returns to foreign human capital and the poor entry outcomes could be attributed to a low transferability of their human capital due to languages barriers, cultural differences, educational quality and discrimination. Indeed a large portion of recently landed immigrants come from countries where neither English nor French is an official language. Further, these immigrants come from countries which Canadian employers are not familiar with and it is likely that employers have difficulty assessing the value of the degrees and experience that immigrants obtained in the source country and therefore have difficulty determining their

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<sup>2</sup> Ferrer and Riddell (2008) find that once years of schooling are controlled for, immigrants actually receive a higher return for completed degrees than the Canadian-born.



equivalence to education and work experience obtained in Canada. As well, given the large variance in source country quality of educational systems, not all degrees that are the same in name are equivalent in value in the labour market because of differences in school quality or content.

The value of the credentials or degrees of foreign trained immigrants is established by either the employers or the 'market-value' judgments of professional licensing bodies (Reitz, 2001). Consequently, identifying the reason why the skills of immigrants are discounted or not recognized is difficult. It could be due to a lack of knowledge of the source of the credentials, in which case the risk-averse employer would prefer a Canadian worker or a candidate whose degree he/she already knows; it could also be explained by negative stereotypes or discrimination. In any of these cases the consequences are an underestimation and thus an underutilization of immigrants' skills which are as useful as the skills acquired by the Canadian born (Reitz, 2001) and a net loss of both economic growth, and the public resources since immigrants would need economic support (Green and Worswick, 2004).

With regards to the discrimination argument, Becker (1971) explains that discrimination in the market place based on religion, race, sex, or other considerations, may cause equally productive workers to receive different earnings. Nonetheless, it is hard to evaluate the relevance of the foreign credentials and foreign work experience to the Canadian labour market. Akbari (1999) uses Canadian census data from 1961, 1971, 1981 and 1986 and observes that, since 1957, the percentage of landed immigrants with only a high school degree has decreased and is lower than that of the Canadian-born workers, while the percentage of immigrants with a university degree has increased and is higher

than that of Canadian-born workers. Looking at the landing records of immigrants, Beach, Green and Worswick (2006) note that there was a very large increase in the proportion of immigrants with an undergraduate or graduate degree, particularly after 1993 when the emphasis on education was increased in the selection criteria for skilled worker principal applicants. Therefore, since an increasing portion of these newcomers are visible minorities and at the same time they are more educated than the previous cohorts, one cannot rule out discrimination as an explanation for the low earnings that they experience in the 1980s and 1990s.

The findings by Ferrer, Green and Riddell (2006) demonstrate that differences in the human capital between immigrants and the Canadian born are an important determinant of the different earning outcomes. They used the Ontario Immigrant Literacy Survey (OILS) which was carried out in 1998 to study the language and literacy skills of all immigrants from 16 to 69 years old residing in Ontario's six main census metropolitan areas<sup>3</sup> (CMA) and the 1994 Canadian version of the International Adult Literacy Survey (IALS). Their findings show that immigrants and the Canadian born receive equivalent returns to literacy; and that up to two-third of the earnings gap for both the university educated and the less-educated group could be explained by literacy differences between immigrants and Canadian born workers. While the composition of immigrants has changed drastically in terms of source country and ethnic composition over the past sev-

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<sup>3</sup> Toronto (including Peel region), Hamilton, Ottawa, Kitchener, London and St. Catherines-Niagara.

eral decades, this change has also likely brought with it a large change in quality of the foreign acquired human capital of immigrants.<sup>4</sup>

We add to the literature on immigrant economic outcomes by examining the role of quality differences in source country human capital as a reason for earning differentials between immigrants. Specifically, we examine the relationship between source country GDP per capita and entry economic outcomes in Canada. The quality of the human capital has been found to be an important determinant of the economic growth of a country (Hanushek and Kimko, 2000) and the quality of the source country human capital is highly correlated with economic outcomes of immigrants in Canada (Sweetman, 2004). Potentially source country output can also help explain the economic outcomes of immigrants in the host country. Immigrants from countries with high GDP per capita, likely have a higher level of average human capital available to them than immigrants from countries with low levels of GDP, and therefore are more likely to succeed in the Canadian labour market.

### **3. Data and Methodology**

The main data source used is the Longitudinal Survey of Immigrants to Canada (LSIC). The LSIC contains a sample of immigrants who immigrated between October 1<sup>st</sup>, 2000 and September 30<sup>th</sup>, 2001 and applied to immigrate at a Canadian Mission abroad. The LSIC consists of three waves of interviews conducted around 6 months after landing

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<sup>4</sup> Warman (2007) finds that the increasing tendency of immigrants to cluster in ethnic neighborhoods prevents them from learning the host region language and from integrating into the Canadian labor market.

between 2001 and 2002 (wave 1), then around two years later in 2003 (wave 2) and then approximately four years later in late 2005 and 2006 (wave 3).

The main model estimated is the following:

$$\ln y_{it} = \alpha X_i + \delta W_{it} + \beta GDP_i + \varepsilon_{it} \quad (1)$$

where  $\ln y_{it}$  is the natural logarithm of immigrant  $i$ 's weekly earnings from their main job for wave  $t$  ( $t=1,2,3$ );  $GDP_i$  is defined as immigrant  $i$ 's home country GDP per capita divided by \$10,000 in 2005 Canadian currency;  $\varepsilon_{it}$  is an *iid* error term. The source country GDP per capita is obtained from the Penn World Tables (PWT6.2). We use data for 1999 since the year prior to landing should best reflect the economic productivity of the source country and therefore the available source country human capital to the immigrant.<sup>5</sup> We transfer the international dollars into US dollars and then using the exchange rate, we transfer the figures into Canadian dollars (2005 dollars).

Although we focus mainly on earning outcomes, we also examine employment.

When employment is the dependent variable the following model is estimated:

$$y_{it} = \alpha X_i + \delta W_{it} + \beta GDP_i + \varepsilon_{it} \quad (2)$$

where  $y_{it}$  is 0 if individual  $i$  is unemployed and 1 if individual  $i$  is employed at the survey date; equations (1) and (2) are estimated for each of the three waves. While we also use panel data methods to estimate the earning outcomes, given the different time durations of each wave (6 months, 1.5 years and 2 years) we focus on estimating the results separately by wave. As well, the last wave best reflects the economic integration of immigrants, so

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<sup>5</sup> Given that countries may be at a different point in the business cycle in a given year, we also reran all of the results using a five year average of GDP (1995 to 1999) and found very similar results.

estimating the waves separately allows us to concentrate on the third wave.  $X_i$  is a matrix that includes controls for age at immigration,  $(\text{age at immigration})^2/100$ , highest level of education before immigration, class of immigration, region of birth. The matrix  $W_{it}$  includes controls that vary by cycle; months since migration, region of residence, marital status, number of kids and English and French language ability. The sample is restricted to immigrants between 25 and 59 years old (based on age at the first wave) in order to exclude immigrants who may be choosing between entering the labour market or pursuing post secondary education.

In order to control for the highest level of education completed at the time of immigration we include dummies for each of the following levels of education: less than high school, high school (omitted category), some post secondary, college, Bachelor degree, and a graduate degree. A dummy is included for each of the following regions of birth as well: Western Europe and the U.S. (omitted category), Central and South America, Caribbean, Other Europe, Africa, Asia and the Middle East. Likewise, we include controls for the region of residence with dummies for: the Atlantic provinces, Quebec (excluding Montreal), Montreal, Ontario (excluding Toronto), Toronto (omitted category), Manitoba and Saskatchewan, Alberta, British Columbia (excluding Vancouver), and Vancouver. We control for English and French language ability with two pre-constructed variables in the LSIC created using factor analysis from a set of self-assessed questions on language ability as well as questions on language use. These variables range from 0 to 1, where 1 is associated with a very high level of speaking, reading and writing ability in the language being considered. We also control for the following class of entry: skilled worker principal applicants (omitted category), skilled worker spouses and de-

pendents, business class, family class, refugees, as well as other immigrant classes. The skilled worker principal applicant category consists of immigrants who are directly assessed under the point system. They are able to communicate at a certain level in at least one official language, and are expected to be able to integrate relatively well into the labour market, while sponsored refugees and the family class immigrants are admitted based on humanitarian criteria.<sup>6</sup> Therefore, earnings may be different between these groups. Finally, we control for marital status, with dummies for single never married, married/common-law and other (default), as well as a continuous variable for number of children.

Given the different labour market outcomes between males and females, as well as the different labour market attachment, we run the regressions separately by gender. In the next section, we discuss the summary statistics of some of the main variables and then we start by estimating equation (1) using OLS separately for each wave. Then using equation (2), we compute the impact of the source country GDP per capita on the probability of being employed in each wave. Separate regressions are run first only controlling for age at immigration and months since migration then we add the full set of controls: age, gender, marital status, number of children, highest degree obtained before immigration, region of residence, immigration category, broad region of origin and language skills.

We also examine the relationship between source country GDP per capita and the returns to source country human capital. For comparison with previous research, (such as Aydemir and Skuterud, 2005), we start by examining the returns to foreign schooling and

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<sup>6</sup> While skilled worker spouses and dependents are not directly assessed under the point system, the skilled worker principal applicant may obtain points under the adaptability criteria based on certain characteristics of the spouse.

foreign work experience. We then interact the years of schooling and years of work experience with the source country GDP per capita and estimate the following model:

$$\ln y_{it} = \alpha X_i + \delta W_{it} + \beta GDP_i + \gamma \exp er_i + \delta yrschool_i + \lambda \exp er_i \times GDP_i + \phi yrschool_i \times GDP_i + \varepsilon_{it} \quad (3)$$

$$y_{it} = \alpha X_i + \delta W_{it} + \beta GDP_i + \gamma \exp er_i + \delta yrschool_i + \lambda \exp er_i \times GDP_i + \phi yrschool_i \times GDP_i + \varepsilon_{it} \quad (4)$$

The years of work experience at arrival variable is calculated as:  $\exp er_i = age_i - yrschool_i - 6$  where age is the age at immigration. We finish by estimating the model for the three waves using a random effects model. Since the GDP data are fixed, the fixed effects model is not used (however, fixed effects are used when we examine how the relationship between source country GDP and earnings change with time in Canada). In all models, robust standard errors are also used to correct for heteroskedasticity. As well, the standard errors are clustered on the source country variable in all regressions to correct for the use of aggregate variables (see Moulton, 1990).

#### 4. Empirical Results

The descriptive statistics for the main variables used in the analysis are provided in Table 1 separately for males and females. Previous studies have underlined the importance of host country language ability, age at immigration, gender, education and the region of origin, on the labour market performance of immigrant in the host country. Our

sample is highly educated, with around 72 and 57 percent of males and females with a university degree, respectively. Males tend to be more educated than females, both in terms of years of schooling and highest degree, likely since a higher proportion of males are skilled worker principal applicants and therefore are more likely to be directly assessed under the points system. While the males are slightly older than the females in our sample, they have less years of potential work experience. Although, as noted by Hum and Simpson (2004), the potential experience of female immigrants does not capture their

**Table 1: Means**

Variable	Males		Females	
	Mean	95% Confidence Interval	Mean	95% Confidence Interval
Source country GDP	9436.6	(9067.76, 9805.42)	9933.6	(9543.47, 10323.81)
Age wave 1	36.23	(35.95, 36.51)	35.34	(35.04, 35.63)
Years of school at arrival	15.83	(15.71, 15.9)	14.57	(14.44, 14.70)
Years of potential work experience at arrival	13.90	(13.58, 14.22)	14.27	(13.91, 14.63)
<b><i>Highest degree at arrival</i></b>				
high school or less	0.12	(.11, .13)	0.21	(.20, .23)
college or trade	0.10	(.09, .11)	0.16	(.14, .17)
some post-secondary	0.06	(.05, .07)	0.06	(.06, .07)
university	0.72	(.70, .73)	0.57	(.55, .58)
<b><i>Source region</i></b>				
Western countries	0.15	(.14, .16)	0.15	(.14, .17)
Non-Western countries	0.85	(.84, .86)	0.85	(.83, .86)
<b><i>Language abilities score</i></b>				
English wave 1	0.68	(.67, .69)	0.56	(.55, .57)
English wave 2	0.71	(.70, .72)	0.61	(.59, .62)
English wave 3	0.72	(.71, .73)	0.62	(.61, .63)
French wave 1	0.14	(.13, .15)	0.12	(.11, .13)
French wave 2	0.16	(.15, .17)	0.13	(.12, .15)
French wave 3	0.17	(.15, .18)	0.14	(.13, .15)



actual work experience very well. We find that most male and female immigrants come from non-traditional countries, with over 85% of immigrants coming from non-western countries.

#### **4.1 Impact of GDP on earnings and employment outcomes**

We start with the simplest model, only controlling for age and months since migration. We find a positive correlation between source country GDP per capita and earning outcomes for males. The magnitude of this relationship decreases when we include the full set of controls, likely since the broad regions of origin variables and language ability are highly correlated with source country GDP per capita. The results indicate that an increase of 10,000 dollars in the source country GDP increases earnings in the first wave by 20% for males (column 1, row 1) when we control only for age and months since migration (calculated as  $e^{\beta} - 1$ ); once we include all the controls, the earnings increase by 14% for males (column 2, row 1). The magnitude of the relationship becomes less important with time in Canada, and by the third wave, a 10,000 dollar increase in source country GDP increases earnings by 13% and 6% (when we control for age and months since migration and when we control for all variables, respectively).

For females, we do not find much relationship between source country GDP and earning outcomes. We find a positive relationship when we control only for age and months since migration in the second wave and a negative relationship when we include all the controls in wave 3. For the most part, we do not find a very strong relationship between source country GDP and employment outcomes. For males, we find a negative re-

lationship in the first wave, and only after controlling for the full set of demographic and human capital controls. The results suggest that an increase in source country GDP by 10,000 dollars decreases the probability of being employed by around five percent at the time of the first interview. Potentially immigrants from high GDP countries have more resources and are able to spend more time looking for more appropriate employment when they first arrive.

**Table 2: Earnings and Employment outcomes for males and females**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>2a) Wave 1</b>	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.179**	0.132**	0.053	-0.040	0.002	-0.048**	0.005	-0.029+
	[0.033]	[0.024]	[0.034]	[0.037]	[0.034]	[0.017]	[0.022]	[0.017]
R-squared	0.09	0.19	0.01	0.13	0.02	0.21	0.01	0.15
<b>2b) Wave 2</b>								
GDP	0.141**	0.082**	0.052*	-0.008	0.015	-0.021	0.020	-0.036
	[0.030]	[0.023]	[0.025]	[0.034]	[0.024]	[0.017]	[0.025]	[0.023]
R-squared	0.08	0.22	0.02	0.16	0.02	0.14	0.01	0.14
<b>2c) Wave 3</b>								
GDP	0.123**	0.062*	0.010	-0.087*	0.016	-0.008	0.015	-0.036+
	[0.027]	[0.025]	[0.037]	[0.042]	[0.016]	[0.019]	[0.022]	[0.021]
R-squared	0.08	0.22	0.02	0.18	0.02	0.12	0.03	0.16
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of the first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. The full results are presented in the Appendix (see Tables A1a, A1b and A1c). Employment coefficients are displayed as marginal effects.

Not surprisingly, we find that immigrant class is very important, and all of the immigrant classes tend to have lower earnings than the skilled worker principal applicants, except for the “other class” for females (see tables A1a, A1b and A1c in the appendix for the full set of results). As well, as with previous literature, we find that language ability is very important for labour market outcomes. Surprisingly, we do not find a large difference between high school graduates and other highest degrees. This is mainly due to

the inclusion of language ability; once we do not control for language ability, the differences between the highest degrees becomes much more pronounced in the earning regressions. Again, we find that language ability has a large positive impact on being employed. We find that for males, family class immigrants are more likely to be employed than skilled worker principal applicants, while for females, they are less likely to be employed.

Presumably, the relationship between source country productivity and host country outcomes will vary depending on the level of human capital of the immigrant. We restrict the sample to immigrants with at least a university degree (Table 3) and then to immigrants with only a high school education or less (Table 4). We find that for highly-educated males, the positive correlation between earnings and the source country GDP drops throughout the three waves and is similar to the results from Table 2 with the full sample. For low educated males, we do not find the same decrease in the relationship and by the second wave, the correlation between earnings and source country GDP is larger for the less educated group of males. We actually find that the relationship increases between the second and third waves, and by the third wave, a 10,000 dollar increase in source country GDP increases earnings by over 20%. Conversely for females, we find that the relationship between source country GDP and earnings is larger for the highly-educated group. For females immigrants with at most a high school education, there is no relationship between source country productivity and earnings. For females with a university education, the relationship is larger than that found for the full sample when we only control for age and months since migration, but again, once we control for other demographic variables such as marital status, number of kids and language ability, the relationship disappears.

**Table 3: Earnings and Employment outcomes for university graduates**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>3a)Wave 1</b>	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.210**	0.172**	0.089*	-0.023	-0.011	-0.052**	0.011	0.004
	[0.034]	[0.032]	[0.040]	[0.053]	[0.043]	[0.018]	[0.034]	[0.030]
R-squared	0.09	0.18	0.03	0.15	0.01	0.23	0	0.17
<b>3b)Wave 2</b>								
GDP	0.155**	0.097**	0.069+	0.001	0.01	-0.028	0.026	-0.005
	[0.033]	[0.030]	[0.038]	[0.054]	[0.029]	[0.019]	[0.033]	[0.032]
R-squared	0.05	0.21	0.03	0.16	0.01	0.14	0.01	0.15
<b>3c)Wave 3</b>	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.126**	0.057+	0.01	-0.087	0.01	-0.02	0.015	-0.02
	[0.034]	[0.030]	[0.050]	[0.061]	[0.023]	[0.023]	[0.027]	[0.028]
R-squared	0.06	0.19	0.01	0.16	0.01	0.11	0.01	0.14
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table 4: Earnings and employment outcomes for immigrants with high school education or less**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>4a)Wave 1</b>	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.190**	0.173**	0.049	-0.013	0.025	-0.036	-0.002	-0.035+
	[0.053]	[0.048]	[0.042]	[0.069]	[0.028]	[0.032]	[0.025]	[0.018]
R-squared	0.14	0.33	0.02	0.24	0.03	0.18	0.04	0.18
<b>4b)Wave 2</b>								
GDP	0.168**	0.107*	0.022	-0.013	0.044+	0.033	0.039	0.001
	[0.047]	[0.049]	[0.039]	[0.051]	[0.025]	[0.037]	[0.027]	[0.036]
R-squared	0.17	0.3	0.01	0.14	0.02	0.16	0.04	0.17
<b>4c)Wave 3</b>								
GDP	0.194**	0.193**	0.018	-0.04	0.037	0.034	0.05	-0.02
	[0.056]	[0.058]	[0.038]	[0.048]	[0.028]	[0.040]	[0.032]	[0.032]
R-squared	0.19	0.31	0.01	0.16	0.04	0.16	0.05	0.19
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table 5: Earnings and Employment outcomes for immigrants with high English ability**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
5a)Wave 1	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.192**	0.154**	0.065*	-0.008	0.005	-0.036+	0.002	-0.028
	[0.024]	[0.023]	[0.029]	[0.030]	[0.027]	[0.020]	[0.017]	[0.022]
R-squared	0.1	0.19	0.02	0.15	0.01	0.21	0.00	0.19
5b)Wave 2								
GDP	0.140**	0.089**	0.062*	0.026	0.014	-0.012	0.001	-0.031
	[0.024]	[0.023]	[0.029]	[0.030]	[0.027]	[0.020]	[0.017]	[0.022]
R-squared	0.07	0.2	0.02	0.16	0.01	0.12	0.00	0.16
5c)Wave 3								
GDP	0.133**	0.074**	0.000	-0.087*	0.003	-0.013	-0.003	-0.036+
	[0.023]	[0.024]	[0.035]	[0.043]	[0.013]	[0.018]	[0.021]	[0.020]
R-squared	0.07	0.2	0.01	0.16	0	0.08	0.01	0.2
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table 6: Earnings and employment outcomes for immigrants with low English ability**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
6a)Wave 1	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.092*	0.074	-0.031	-0.140	-0.009	-0.034	-0.011	-0.032+
	[0.037]	[0.055]	[0.107]	[0.093]	[0.049]	[0.021]	[0.036]	[0.019]
R-squared	0.03	0.13	0.01	0.19	0.03	0.18	0.01	0.12
6b)Wave 2								
GDP	0.117**	0.079	-0.032	-0.153**	0.011	-0.076	0.036	-0.006
	[0.026]	[0.053]	[0.052]	[0.057]	[0.054]	[0.052]	[0.051]	[0.032]
R-squared	0.08	0.22	0.01	0.11	0.02	0.21	0.01	0.12
6c)Wave 3								
GDP	0.050*	-0.007	0.007	-0.102*	0.074+	0.027	0.039	0.003
	[0.021]	[0.035]	[0.067]	[0.042]	[0.043]	[0.033]	[0.041]	[0.021]
R-squared	0.1	0.24	0.02	0.19	0.04	0.16	0.02	0.13
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

We next examine how the relationship varies with language ability. The language ability scores range from zero to one and we break the sample up into immigrants with high English language ability (score  $\geq 0.5$ ) and low English language ability (score  $< 0.5$ ). Source country GDP matters more for immigrants with strong language ability for

males. Likely, the poorer language ability makes it more difficult for them to transfer their source country human capital and so reduces the benefit of coming from a more productive economy. For females, we find that for high English language ability workers, inconsistent results are found, while for the low English language ability workers, source country GDP actually has a negative relationship with earnings once the full set of controls are added. Source country GDP is not found to have much of an effect on employment outcomes.

**Table 7: Earnings and employment outcomes for immigrants from western countries**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
7a)Wave 1	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.152**	0.187**	0.021	0.003	0.028	-0.021	0.051**	-0.035
	[0.052]	[0.027]	[0.043]	[0.049]	[0.019]	[0.018]	[0.013]	[0.025]
R-squared	0.11	0.32	0.02	0.16	0.03	0.19	0.06	0.26
7b)Wave 2								
GDP	0.101*	0.138**	0.051**	0.014	0.019	0.015+	0.018	-0.023
	[0.048]	[0.019]	[0.017]	[0.037]	[0.015]	[0.009]	[0.029]	[0.023]
R-squared	0.07	0.25	0.03	0.22	0.01	0.15	0.04	0.19
7c)Wave 3								
GDP	0.091+	0.112**	0.001	-0.031	0.012	0.018+	0.017	-0.015
	[0.045]	[0.017]	[0.028]	[0.036]	[0.008]	[0.009]	[0.029]	[0.025]
R-squared	0.06	0.32	0.03	0.26	0.02	0.19	0.05	0.2
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

In Table 7 and 8, we show the results for when we restrict the sample to western and non-western countries respectively. Controlling only for age and months since migration, the positive correlation is larger for male immigrants from non-western countries relative to the results for immigrants from western countries. However, once we introduce the other control variables, such as languages abilities, the opposite is true. For females, we do not find a consistent relationship for either group. In terms of employment, for

males, we find some positive relationship for immigrants from western countries in waves two and three with full controls, while for the non-western sample, we find a negative relationship, but that is only statistically significant in wave 3 (and at the 10 percent level). For females, we find that higher source country GDP increases employment outcomes of the western sample at the time of first interview.

**Table 8: Earnings and employment outcomes from immigrants from non-western countries**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
8a)Wave 1	Male	Male	Female	Female	Male	Male	Female	Female
GDP	0.175**	0.105**	0.041	-0.073	-0.034	-0.053+	-0.016	-0.055**
	[0.038]	[0.035]	[0.060]	[0.050]	[0.054]	[0.027]	[0.034]	[0.021]
R-squared	0.06	0.15	0.01	0.14	0.02	0.22	0.01	0.15
8b)Wave 2								
GDP	0.126**	0.062	0.025	-0.037	-0.01	-0.037	-0.005	-0.052+
	[0.034]	[0.037]	[0.044]	[0.058]	[0.034]	[0.026]	[0.033]	[0.028]
R-squared	0.05	0.2	0.01	0.15	0.02	0.14	0.01	0.15
8c)Wave 3								
GDP	0.107**	0.031	-0.023	-0.124+	-0.002	-0.017	-0.009	-0.044
	[0.039]	[0.037]	[0.068]	[0.068]	[0.022]	[0.028]	[0.027]	[0.027]
R-squared	0.06	0.2	0.02	0.18	0.02	0.12	0.02	0.16
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

We next examine the sample separately for skilled worker principal applicants (Table 9) and family class immigrants (Table 10).<sup>7</sup> As previously discussed, skilled worker principal applicants are directly assessed based on their ability to integrate economically into the Canadian labour market. For male skilled worker principal applicants, again we find that the relationship between source country GDP and earnings is large and positive in the first wave, but decreases in magnitude with time in Canada. For family class immigrants, source country GDP is much more important in terms of earning out-

<sup>7</sup> We do not look at refugees separately since the LSIC only surveys immigrants who applied from outside of Canada, and so we only have a small and unrepresentative sample of refugees.

comes. For females we do not find any relationship in terms of earnings. We find large initial differences with the relationship between source country GDP and employment

**Table 9: Earnings and employment outcomes for skilled workers principal applicants**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male	Male	Female	Female	Male	Male	Female	Female
9a)Wave 1								
GDP	0.158**	0.142**	0.043	-0.02	-0.002	-0.040*	0.039	0.058+
	[0.042]	[0.024]	[0.039]	[0.035]	[0.035]	[0.020]	[0.027]	[0.035]
R-squared	0.07	0.16	0.02	0.18	0.01	0.21	0.01	0.18
9b)Wave 2								
GDP	0.120**	0.084**	0.031	-0.024	0.013	-0.017	0.036	0.035
	[0.037]	[0.027]	[0.038]	[0.048]	[0.024]	[0.020]	[0.029]	[0.024]
R-squared	0.05	0.18	0.02	0.18	0.01	0.11	0.01	0.19
9c)Wave 3								
GDP	0.093**	0.050+	-0.017	-0.065	0.004	-0.011	0.039*	0.03
	[0.035]	[0.028]	[0.048]	[0.058]	[0.018]	[0.022]	[0.015]	[0.025]
R-squared	0.04	0.16	0.01	0.17	0	0.09	0.02	0.13
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table 10: Earnings and employment outcomes for the family class of immigrants**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male	Male	Female	Female	Male	Male	Female	Female
10a)Wave 1								
GDP	0.238**	0.252**	0.049	-0.081	-0.007	-0.04	-0.003	-0.064*
	[0.022]	[0.053]	[0.063]	[0.083]	[0.021]	[0.033]	[0.028]	[0.030]
R-squared	0.29	0.4	0.02	0.26	0.06	0.15	0.03	0.15
10b)Wave 2								
GDP	0.185**	0.142**	0.080**	0.066	0	-0.036	0.023	-0.028
	[0.027]	[0.027]	[0.029]	[0.076]	[0.014]	[0.022]	[0.027]	[0.033]
R-squared	0.26	0.38	0.05	0.15	0.06	0.2	0.05	0.14
10c)Wave 3								
GDP	0.171**	0.130**	0.048	-0.069	0.041**	-0.013	0.003	-0.047
	[0.019]	[0.025]	[0.046]	[0.052]	[0.014]	[0.023]	[0.025]	[0.035]
R-squared	0.25	0.34	0.02	0.14	0.07	0.22	0.04	0.18
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

outcomes for females. Source country GDP increases the probability that females entering as skilled worker principal applicants work at the time of the first interview relative to female family class immigrants, however the difference decreases with time in Canada.



## 4.2 Panel Data Estimates

Next we examine the weekly earnings results using a random effects model. Again we find a large positive relationship between source country GDP per capita and earning outcomes of male immigrants (column 1 of Table 11) and we find that an increase of \$10,000 in source country GDP increases weekly earnings by around 11%. For females, we find a negative relationship. The findings for females may occur because the earnings of the male spouse will be higher if they come from a country with higher GDP and so the female does not need to supply as much effort or time in the labour market.

**Table 11: Random Effects Estimates of Source Country GDP and Fixed Effects Estimates of the interaction between Source Country GDP and Months since Migration**

	Random Effects		Fixed Effects	
	(1) Male	(2) Female	(3) Male	(4) Female
GDP	0.104** [0.022]	-0.056+ [0.032]		
months since migration	0.009** [0.000]	0.007** [0.000]	0.010** [0.001]	0.008** [0.001]
(months since migration x GDP) ÷ 100			-0.117** [0.025]	-0.014 [0.057]
Overall R <sup>2</sup>	0.27	0.16	0.03	0.03
Within R <sup>2</sup>	0.20	0.11	0.21	0.12
Between R <sup>2</sup>	0.28	0.16	0.01	0.01

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of the first wave. Random effects regressions control for age, highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. The full results are presented in the Appendix (see Table A2).

In our previous result when we estimated the earning outcomes separately by wave we found that for most specifications, the relationship decreases with time in Canada. We re-estimate the panel model interacting months since migration with source country GDP, and given that months since migration varies by individual over the three waves, we are able to use a fixed effects model (columns 3 and 4 of Table 11). We find that while earnings increase with time in Canada (earnings increase by around 1 percent

with each month in Canada over the period covered by the study), there is a large negative relationship between the impact of source country GDP and time in Canada.<sup>8</sup> Interestingly, once individual fixed ability is removed using our fixed effects model, the strong relationship between language ability and earning outcomes decreases greatly in magnitude and is no longer statistically significant (see columns 3 and 4 of Table A2 in the appendix).

### **4.3 Impact of foreign experience and schooling on earnings and employment outcomes**

We next examine the link between source country GDP per capita and the returns to foreign human capital measured by years of schooling and years of potential work experience. A priori we would expect a positive relationship between the quality of the human capital of immigrants and the productivity of the source country. Similarly to previous research (Schaafsma and Sweetman, 2001; Green and Worswick, 2004; and Aydemir and Skuterud, 2005), we find that the returns to foreign work experience are close to zero or even negative (columns 1 and 3 of Table 12).<sup>9</sup> Surprisingly, we do not find that immigrants receive any returns to their years of foreign schooling. Once we interact source country GDP with experience and years of schooling, we find that for males there is a positive relationship for both; the returns to foreign acquired human capital increases with the level of productivity of the source country. For females, while we find that the returns

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<sup>8</sup> Very similar results were found for the months since migration x GDP interaction when the random effects model was used.

<sup>9</sup> Although most studies include a quadratic term for experience, we find that in most specifications the relationship between potential foreign work experience and earnings is linear.

to schooling increase with source country GDP in wave 1, however, the magnitude of this relationship decreases over the sample period.

**Table 12: The relationships between years of foreign school and years of foreign work experience and source country GDP on earnings and employment outcomes**

	Earnings				Employment			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>12a)Wave 1</b>								
GDP	0.134** [0.024]	-0.140 [0.110]	-0.051 [0.038]	-0.305* [0.120]	-0.045** [0.017]	0.106 [0.119]	-0.021 [0.015]	-0.008 [0.058]
Work experience	-0.002 [0.002]	-0.008** [0.002]	-0.001 [0.002]	-0.004 [0.003]	-0.009** [0.002]	-0.005+ [0.003]	-0.002+ [0.001]	0.002 [0.001]
Years of school	0.005 [0.008]	-0.007 [0.010]	-0.004 [0.009]	-0.022* [0.009]	-0.027** [0.006]	-0.023** [0.008]	-0.014** [0.003]	-0.016** [0.004]
Experience x GDP		0.006** [0.002]		0.002 [0.003]		-0.005** [0.002]		-0.004** [0.001]
School x GDP		0.012* [0.006]		0.015* [0.007]		-0.005 [0.006]		0.003 [0.003]
R-squared	0.18	0.19	0.12	0.13	0.20	0.21	0.14	0.15
<b>12b)Wave 2</b>								
GDP	0.085** [0.022]	-0.070 [0.053]	-0.012 [0.032]	-0.135 [0.139]	-0.019 [0.017]	0.041 [0.086]	-0.022 [0.021]	0.032 [0.089]
Work experience	-0.007** [0.001]	-0.011** [0.002]	-0.003 [0.003]	0.001 [0.002]	-0.006** [0.002]	-0.003 [0.002]	-0.002 [0.001]	0.002 [0.002]
Years of school	-0.002 [0.006]	-0.008 [0.007]	0.003 [0.008]	-0.009 [0.009]	-0.012** [0.004]	-0.010+ [0.006]	-0.016** [0.005]	-0.015* [0.006]
Experience x GDP		0.005** [0.002]		-0.005* [0.002]		-0.003 [0.002]		-0.004** [0.001]
School x GDP		0.006* [0.003]		0.012 [0.008]		-0.001 [0.004]		-0.000 [0.004]
R-squared	0.21	0.22	0.15	0.16	0.13	0.13	0.15	0.15
<b>12c)Wave 3</b>								
GDP	0.060* [0.024]	-0.098 [0.063]	-0.098* [0.041]	-0.130 [0.102]	-0.008 [0.018]	0.012 [0.065]	-0.027 [0.020]	0.082 [0.088]
Work experience	-0.010** [0.002]	-0.015** [0.002]	-0.008** [0.002]	-0.005 [0.003]	-0.005** [0.001]	-0.004* [0.001]	-0.004* [0.002]	-0.001 [0.002]
Years of school	-0.002 [0.006]	-0.008 [0.007]	-0.001 [0.008]	-0.005 [0.009]	-0.009** [0.003]	-0.008* [0.004]	-0.011+ [0.006]	-0.006 [0.008]
Experience x GDP		0.005** [0.002]		-0.003 [0.003]		-0.001 [0.001]		-0.003* [0.001]
School x GDP		0.006+ [0.003]		0.005 [0.006]		-0.000 [0.003]		-0.004 [0.005]
R-squared	0.22	0.22	0.17	0.17	0.11	0.11	0.15	0.15

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1% . Sample aged 25 to 59 at time of first wave. All regressions control for age and months since migration, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

We also find that the probability of being employed decreases with years of potential work experience and with years of schooling. While the interaction term between years of school and GDP is insignificant in the employment probit regressions, years of

foreign work experience decreases the probability of being employed more for females from high GDP per capita source countries.

## **5 Conclusion**

Immigrants have experienced poor economic outcomes in Canada and in many other western immigrant-receiving countries. One reason is that recent immigrants have had difficulty transferring their source country human capital to the host countries labour market. Using a unique Canadian data set that follows a cohort of immigrants for the first four years since arrival, we examine the relationship between source country GDP and the entry earnings and employment outcomes of recently landed immigrants to Canada. Potentially, immigrants from countries that are more productive, and therefore have higher GDP per capita, should have higher quality human capital and should be better able to integrate into the Canadian economy.

We find some evidence to support this hypothesis. We find that for males, there is a large positive relationship between GDP per capita and earnings. However, for females, we do not find any consistent evidence. We next examine how the relationship between economic outcomes and GDP varies for different demographic groups. First, when we examine different educational groups, we find a positive relationship for both high-educated (university graduates) and low educated (high school or less) males, although the relationship is larger for our less educated sample.

Language ability is very important in determining the relationship between source country GDP per capita and earnings. While there is a large positive relationship between

the earning outcomes and source country productivity for male immigrants with strong language ability, the relationship is much smaller for male immigrants with poor language ability. Class is also an important determinant of this relationship. For skilled worker principal applicants, the group that is assessed based on their ability to integrate economically, the relationship is positive for males, but not as large as it is for immigrants who enter under the family class.

While we are able to examine the entry outcomes, the data for our sample only covers the first four years in Canada. Therefore, it is difficult to determine if the positive relationship between source country GDP and earnings for males will remain important as immigrants spend more time in the host country or whether the importance of the source country productivity at time of immigration will decrease. In most cases (except for less-educated workers), the magnitude of the relationship between source country GDP and earnings decreases with time in Canada, although still remains important for males four years after immigrating.

Similar to previous research, we find that returns to foreign work experience are negative, but surprisingly, we find no returns to schooling. When we interact source country GDP with experience and schooling, we find that for males, the returns to years of schooling and years of foreign work experience increase with the source country productivity. For females, we also find evidence that the returns to foreign years of schooling increases with source country GDP per capita.

Overall, our results suggest an important link between source country productivity and the economic integration of male immigrants. These findings suggest that the shift in

source regions from developed to mainly developing countries can help to account for some of the decline in earning outcomes since the immigrants from developing countries will have worked and been trained in economies with lower productivity and therefore, will bring with them lower quality human capital to transfer to Canadian economy. As well, the positive relationship may be explained by differences in incentives to migrate. In most cases, immigrants will only come to Canada if they expect to be better off economically than they were in the source country. Therefore, it will take a larger payoff to entice someone to leave a country that has higher GDP per capita than it will to get a potential immigrant to leave a country with lower GDP per capita.

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## Appendix

**Table A1a: Earnings and Employment outcomes for males and females, Wave 1**

	Earnings				Employment			
	(1) Male	(2) Male	(3) Female	(4) Female	(5) Male	(6) Male	(7) Female	(8) Female
GDP	0.179** [0.033]	0.132** [0.024]	0.053 [0.034]	-0.040 [0.037]	0.002 [0.034]	-0.048** [0.017]	0.005 [0.022]	-0.029+ [0.017]
age	0.012 [0.014]	-0.039* [0.019]	-0.004 [0.027]	-0.009 [0.031]	-0.019 [0.018]	-0.001 [0.017]	0.002 [0.011]	0.038** [0.012]
age <sup>2</sup> / 100	-0.022 [0.018]	0.045+ [0.025]	-0.001 [0.038]	0.009 [0.040]	0.012 [0.021]	-0.010 [0.020]	-0.011 [0.014]	-0.052** [0.015]
months since migration	0.012 [0.015]	0.026+ [0.014]	0.023 [0.021]	0.015 [0.019]	0.031** [0.009]	0.041** [0.011]	0.012 [0.011]	0.016* [0.007]
Highest level of Edu- cation								
< high school		0.047 [0.075]		0.187* [0.088]		-0.003 [0.051]		0.060 [0.056]
some postsecondary		-0.185* [0.073]		-0.020 [0.087]		-0.209** [0.047]		-0.050 [0.050]
college		-0.010 [0.058]		-0.131* [0.061]		-0.167** [0.052]		-0.025 [0.033]
Bachelor		-0.037 [0.062]		0.004 [0.071]		-0.254** [0.047]		-0.082* [0.041]
Graduate Degree		0.024 [0.068]		0.004 [0.078]		-0.272** [0.046]		-0.103** [0.038]
Region of Residence								
Atlantic provinces		0.188 [0.236]		0.145 [0.232]		0.084 [0.133]		-0.155 [0.096]
Quebec		-0.255 [0.196]		-0.293 [0.184]		-0.238** [0.089]		-0.153+ [0.082]
Montreal		-0.192* [0.083]		-0.195+ [0.114]		-0.300** [0.084]		-0.168* [0.079]
Ontario		0.060 [0.072]		-0.068 [0.052]		-0.067+ [0.037]		-0.064* [0.030]
Manitoba Sask.		-0.121+ [0.065]		-0.134 [0.243]		0.130* [0.064]		0.026 [0.060]
Alberta		0.006 [0.040]		-0.083 [0.056]		0.060* [0.027]		0.083** [0.026]
BC		0.042 [0.103]		0.015 [0.157]		0.011 [0.082]		0.035 [0.061]
Vancouver		-0.097+ [0.055]		0.032 [0.055]		-0.053* [0.026]		-0.043+ [0.026]
Region of Origin								
Cen\Sth America		-0.185 [0.138]		-0.909** [0.216]		-0.394** [0.083]		-0.176** [0.068]
Caribbean		-0.321* [0.135]		-0.857** [0.199]		-0.375** [0.129]		-0.102 [0.080]
Europe		-0.167 [0.107]		-0.641** [0.168]		-0.283** [0.070]		-0.171** [0.055]
Africa		-0.269+ [0.143]		-0.831** [0.212]		-0.556** [0.060]		-0.258** [0.048]
Asia		-0.377** [0.116]		-0.868** [0.190]		-0.397** [0.073]		-0.138+ [0.083]
Middle East		-0.282* [0.137]		-0.863** [0.183]		-0.508** [0.058]		-0.271** [0.042]
Immigrant Class								
Family class		-0.154**		-0.291**		0.136**		-0.078*

	[0.043]	[0.071]	[0.041]	[0.038]
Refugees	-0.425**	-0.379**	-0.213**	-0.128**
	[0.085]	[0.103]	[0.065]	[0.042]
Skilled Workers (SD)	-0.101*	-0.192**	-0.069+	-0.092**
	[0.048]	[0.069]	[0.037]	[0.029]
Business Class	-0.228*	-0.250	-0.241**	-0.183**
	[0.105]	[0.157]	[0.063]	[0.027]
Others	-0.100	0.297	0.282**	0.033
	[0.083]	[0.324]	[0.032]	[0.126]
Language Ability				
English score	0.470**	0.280**	0.826**	0.547**
	[0.069]	[0.084]	[0.045]	[0.105]
French score	0.018	0.146	0.416**	0.312**
	[0.088]	[0.121]	[0.109]	[0.078]
Married/common-law	0.110	-0.217	0.079	-0.021
	[0.077]	[0.141]	[0.082]	[0.068]
Single never married	0.137+	-0.132	0.053	0.144
	[0.080]	[0.132]	[0.086]	[0.095]
# of Kids	0.009	-0.042+	0.004	-0.061**
	[0.016]	[0.025]	[0.013]	[0.014]
R-squared	0.09	0.19	0.01	0.15

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of the first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table A1b: Earnings and Employment outcomes for males and females, Wave 2**

	Earnings				Employment			
	(1) Male	(2) Male	(3) Female	(4) Female	(5) Male	(6) Male	(7) Female	(8) Female
GDP	0.141** [0.030]	0.082** [0.023]	0.052* [0.025]	-0.008 [0.034]	0.015 [0.024]	-0.021 [0.017]	0.020 [0.025]	-0.036 [0.023]
age	0.053** [0.013]	-0.025 [0.015]	0.011 [0.022]	0.020 [0.025]	0.001 [0.012]	0.023 [0.014]	0.043** [0.013]	0.078** [0.016]
age <sup>2</sup> / 100	-0.079** [0.017]	0.021 [0.019]	-0.025 [0.031]	-0.032 [0.035]	-0.008 [0.015]	-0.037* [0.018]	-0.062** [0.016]	-0.103** [0.020]
months since migration	-0.021 [0.017]	-0.011 [0.014]	-0.046+ [0.025]	-0.031 [0.020]	-0.046** [0.011]	-0.027** [0.010]	-0.025 [0.016]	-0.007 [0.014]
Highest level of Education								
< high school		0.011 [0.055]		0.218** [0.061]		0.093** [0.032]		0.034 [0.043]
some postsecondary		-0.162** [0.046]		-0.104 [0.077]		-0.089 [0.069]		-0.056 [0.055]
college		-0.030 [0.034]		-0.025 [0.040]		-0.009 [0.046]		0.015 [0.053]
Bachelor		-0.070 [0.045]		0.062 [0.055]		-0.088+ [0.050]		-0.072 [0.059]
Graduate Degree		0.017 [0.055]		0.084 [0.064]		-0.112* [0.052]		-0.133** [0.046]
Region of Residence								
Atlantic provinces		0.260 [0.179]		-0.107 [0.138]		-0.119 [0.151]		-0.258** [0.100]
Quebec		-0.165 [0.133]		-0.046 [0.122]		-0.223* [0.087]		-0.232* [0.095]
Montreal		-0.183** [0.054]		-0.206** [0.072]		-0.364** [0.052]		-0.270** [0.091]
Ontario		-0.002 [0.036]		-0.076+ [0.040]		-0.062* [0.030]		-0.090+ [0.048]
Manitoba Sask.		-0.059 [0.047]		-0.045 [0.085]		-0.068 [0.092]		0.079 [0.064]
Alberta		0.084* [0.034]		-0.060 [0.062]		-0.030 [0.028]		-0.003 [0.048]
BC		0.066 [0.077]		0.125 [0.079]		0.034 [0.061]		-0.097 [0.104]
Vancouver		-0.063 [0.052]		-0.117** [0.042]		-0.041 [0.031]		-0.014 [0.042]
Region of Origin								
Cen\Sth America		-0.117 [0.139]		-0.267+ [0.157]		-0.302* [0.136]		-0.150 [0.105]
Caribbean		-0.235+ [0.124]		-0.318 [0.192]		-0.207 [0.127]		-0.199 [0.132]
Europe		-0.118 [0.102]		-0.173 [0.126]		-0.222** [0.084]		-0.141 [0.098]
Africa		-0.246+ [0.138]		-0.372+ [0.221]		-0.478** [0.108]		-0.341** [0.079]
Asia		-0.365** [0.102]		-0.304+ [0.161]		-0.324** [0.073]		-0.251* [0.105]
Middle East		-0.381** [0.107]		-0.446** [0.155]		-0.481** [0.084]		-0.338** [0.075]
Immigrant Class								
Family class		-0.227** [0.051]		-0.235** [0.067]		0.109** [0.040]		-0.130* [0.051]
Refugees		-0.449** [0.069]		-0.388** [0.075]		-0.066 [0.045]		-0.082+ [0.046]
Skilled Workers (SD)		-0.168** [0.038]		-0.217** [0.052]		-0.059 [0.053]		-0.132** [0.031]
Business Class		-0.218		-0.405**		-0.172**		-0.228**

		[0.145]		[0.094]		[0.058]		[0.043]
Others		-0.174**		0.236+		0.198**		-0.221*
		[0.042]		[0.142]		[0.025]		[0.091]
Language Ability								
English score		0.476**		0.382**		0.436**		0.591**
		[0.093]		[0.075]		[0.053]		[0.106]
French score		0.036		0.126		0.270**		0.364**
		[0.095]		[0.133]		[0.074]		[0.076]
Married/common-law		0.010		-0.065		0.007		-0.083
		[0.070]		[0.118]		[0.056]		[0.060]
Single never married		-0.141*		0.073		-0.028		-0.036
		[0.070]		[0.140]		[0.062]		[0.104]
# of Kids		0.027		-0.065**		-0.011		-0.094**
		[0.022]		[0.022]		[0.011]		[0.020]
R-squared	0.08	0.22	0.02	0.16	0.02	0.14	0.01	0.14

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of the first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table A1c: Earnings and Employment outcomes for males and females, Wave 3**

	Earnings				Employment			
	(1) Male	(2) Male	(3) Female	(4) Female	(5) Male	(6) Male	(7) Female	(8) Female
GDP	0.123** [0.027]	0.062* [0.025]	0.010 [0.037]	-0.087* [0.042]	0.016 [0.016]	-0.008 [0.019]	0.015 [0.022]	-0.036+ [0.021]
age	0.044** [0.012]	-0.017 [0.011]	0.016 [0.016]	-0.012 [0.014]	0.018 [0.012]	0.015 [0.013]	0.060** [0.015]	0.073** [0.013]
age <sup>2</sup> / 100	-0.072** [0.016]	0.008 [0.015]	-0.037+ [0.021]	0.005 [0.019]	-0.029+ [0.015]	-0.024 [0.016]	-0.086** [0.020]	-0.100** [0.017]
months since migration	-0.003 [0.014]	0.006 [0.015]	0.017 [0.024]	0.011 [0.026]	0.003 [0.014]	0.003 [0.013]	0.023 [0.022]	0.011 [0.022]
Highest level of Education								
< high school		0.042 [0.055]		0.099 [0.070]		0.002 [0.030]		-0.016 [0.065]
some postsecondary		-0.085 [0.060]		-0.083 [0.064]		0.014 [0.043]		-0.038 [0.045]
college		-0.051 [0.047]		-0.014 [0.046]		-0.009 [0.042]		0.001 [0.038]
Bachelor		-0.004 [0.049]		0.076 [0.058]		-0.018 [0.031]		-0.047 [0.053]
Graduate Degree		0.079 [0.065]		0.174* [0.074]		-0.029 [0.035]		-0.083* [0.036]
Region of Residence								
Atlantic provinces		0.373* [0.154]		0.088 [0.227]		0.000 [0.000]		-0.019 [0.166]
Quebec		-0.065 [0.132]		0.077 [0.110]		-0.282** [0.095]		-0.032 [0.107]
Montreal		-0.123* [0.058]		-0.090 [0.079]		-0.246** [0.044]		-0.225** [0.069]
Ontario		0.007 [0.047]		-0.028 [0.041]		-0.027 [0.025]		-0.025 [0.040]
Manitoba Sask.		-0.173* [0.073]		-0.082 [0.123]		-0.012 [0.058]		0.142* [0.061]
Alberta		0.153** [0.037]		0.084* [0.042]		0.037 [0.026]		0.084** [0.027]
BC		-0.027 [0.064]		0.069 [0.110]		-0.061 [0.091]		-0.042 [0.074]
Vancouver		-0.063 [0.054]		-0.045 [0.053]		0.022 [0.023]		-0.003 [0.040]
Region of Origin								
Cen\Sth America		-0.263* [0.132]		-0.668** [0.197]		-0.006 [0.096]		-0.061 [0.107]
Caribbean		-0.401** [0.132]		-0.750** [0.251]		-0.167 [0.141]		-0.044 [0.134]
Europe		-0.201+ [0.102]		-0.606** [0.165]		0.027 [0.068]		-0.062 [0.097]
Africa		-0.358* [0.143]		-0.745** [0.229]		-0.144 [0.128]		-0.234* [0.117]
Asia		-0.425** [0.111]		-0.739** [0.210]		-0.060 [0.085]		-0.118 [0.104]
Middle East		-0.431** [0.128]		-0.904** [0.193]		-0.179 [0.119]		-0.267** [0.101]
Immigrant Class								
Family class		-0.199** [0.034]		-0.389** [0.067]		0.057* [0.026]		-0.163** [0.054]
Refugees		-0.498** [0.066]		-0.470** [0.074]		-0.011 [0.039]		-0.153* [0.061]
Skilled Workers (SD)		-0.125** [0.046]		-0.264** [0.037]		0.013 [0.029]		-0.136** [0.029]
Business Class		-0.043		-0.311**		-0.114+		-0.267**

Others	[0.102]	[0.112]	[0.060]	[0.038]
	-0.222**	-0.037	0.082**	-0.193+
	[0.046]	[0.225]	[0.029]	[0.113]
Language Ability				
English score	0.416**	0.444**	0.322**	0.556**
	[0.057]	[0.085]	[0.046]	[0.078]
French score	-0.003	0.237	0.214**	0.330**
	[0.094]	[0.143]	[0.052]	[0.075]
Married/common-law	0.106	-0.067	0.007	0.051
	[0.066]	[0.064]	[0.060]	[0.039]
Single never married	0.028	-0.214*	-0.036	0.022
	[0.081]	[0.102]	[0.064]	[0.070]
# of Kids	0.020	-0.078**	-0.006	-0.102**
	[0.014]	[0.019]	[0.008]	[0.025]
R-squared	0.08	0.22	0.02	0.18
			0.02	0.12
				0.03
				0.16

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of the first wave. All regressions control for age and months since migration. Additional controls include: highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids. Employment coefficients are displayed as marginal effects.

**Table A2: Random Effects Estimates of Source Country GDP and Fixed Effects Estimates of the interaction between Source Country GDP and Months since Migration**

	Random Effects		Fixed Effects	
	(1) Male	(2) Female	(3) Male	(4) Female
GDP	0.104** [0.022]	-0.056+ [0.032]		
age	-0.015 [0.011]	0.005 [0.016]		
age <sup>2</sup> / 100	0.008 [0.014]	-0.015 [0.022]		
months since migration	0.009** [0.000]	0.007** [0.000]	0.010** [0.001]	0.008** [0.001]
Highest level of Education < high school	0.032 [0.046]	0.150** [0.055]		
some postsecondary	-0.081+ [0.046]	-0.067 [0.059]		
college	-0.007 [0.038]	-0.035 [0.043]		
Bachelor	-0.008 [0.046]	0.056 [0.052]		
Graduate Degree	0.055	0.099+		
Region of Residence	[0.049]	[0.059]		
Atlantic provinces	0.010 [0.131]	-0.072 [0.144]	-0.231 [0.236]	-0.549* [0.223]
Quebec	-0.383** [0.102]	-0.115 [0.075]	-1.045* [0.465]	-0.518+ [0.276]
Montreal	-0.214** [0.058]	-0.119** [0.046]	-0.385* [0.150]	-0.035 [0.164]
Ontario	-0.016 [0.038]	-0.053+ [0.027]	-0.099+ [0.059]	-0.076 [0.081]
Manitoba Sask.	-0.125** [0.046]	-0.193* [0.090]	0.062 [0.105]	-0.586* [0.248]
Alberta	0.072* [0.031]	-0.041 [0.048]	0.173 [0.117]	-0.276** [0.075]
BC	0.034 [0.073]	0.057 [0.110]	0.017 [0.092]	-0.080 [0.180]
Vancouver	-0.075+ [0.045]	-0.044 [0.039]	-0.174+ [0.105]	-0.106 [0.105]
Region of Origin				
Cen\Sth America	-0.108 [0.119]	-0.590** [0.143]		
Caribbean	-0.221* [0.111]	-0.658** [0.185]		
Europe	-0.095 [0.099]	-0.505** [0.120]		
Africa	-0.176 [0.126]	-0.694** [0.171]		
Asia	-0.315** [0.101]	-0.634** [0.157]		
Middle East	-0.363** [0.113]	-0.800** [0.140]		
Immigrant Class				
Family class	-0.182** [0.039]	-0.322** [0.036]		
Refugees	-0.580** [0.060]	-0.502** [0.063]		
Skilled Workers (SD)	-0.154** [0.033]	-0.263** [0.040]		
Business Class	-0.245**	-0.378**		



	[0.089]	[0.096]		
Others	-0.171**	0.045		
	[0.050]	[0.300]		
Language Ability				
English score	0.307**	0.280**	0.105	0.118
	[0.054]	[0.050]	[0.064]	[0.096]
French score	-0.012	0.171*	-0.187*	-0.077
	[0.072]	[0.083]	[0.093]	[0.091]
Married/common-law	0.053	-0.061	0.014	0.025
	[0.051]	[0.054]	[0.058]	[0.049]
Single never married	0.027	-0.001	0.035	0.103
	[0.046]	[0.053]	[0.054]	[0.073]
# of Kids	0.015	-0.061**	0.024	-0.054*
	[0.013]	[0.012]	[0.016]	[0.022]
(months since migration x GDP) ÷ 100			-0.117**	-0.014
			[0.025]	[0.057]
Constant	6.488**	6.477**	6.069**	5.728**
	[0.289]	[0.374]	[0.077]	[0.080]
Overall R <sup>2</sup>	0.27	0.16	0.03	0.03
Within R <sup>2</sup>	0.20	0.11	0.21	0.12
Between R <sup>2</sup>	0.28	0.16	0.01	0.01

Notes: Robust standard errors in brackets. Standard errors are clustered on source country. + significant at 10%; \* significant at 5%; \*\* significant at 1%. Sample aged 25 to 59 at time of the first wave. Random effects regressions control for age, months since migration, highest level of education, region of residence, region of origin, immigrant class, language ability, marital status, and number of kids.