The Educational Attainment of Second Generation Immigrants in Canada: Analysis based on the General Social Survey

Kucera, Miroslav

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REPORT

Miroslav Kučera
Learning Policy Directorate
Strategic Policy and Research

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by:
Miroslav Kučera

for:
Learning Policy Directorate
Strategic Policy and Research
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Abstract

Using data from the 2001 General Social Survey, this study focused on differences in educational attainment between the children of immigrants to Canada, referred to as second-generation immigrants, and similarly-aged children of Canadian-born parents. Two definitions of second-generation immigrants were introduced. The first considered a Canadian resident with at least one immigrant parent to be a second-generation immigrant, while the second definition required that both parents were foreign-born. All first-generation immigrants were excluded from the sample, except those who had arrived in Canada at the age of 9 or younger; these young immigrants were then included among the second-generation immigrants. The results show that second-generation immigrants did better in terms of schooling attainment than their peers born to Canadian parents. Although a part of the observed difference was explained by differences in individual characteristics, a significant disparity remained even after controlling for them. Moreover, the main result of the children of immigrants being, on average, more educated than the children of the Canadian-born was robust towards different definitions of second-generation immigrants, and held for both men and women.

1. Introduction

The resurgence of immigration in many western countries has initiated an intensive debate over its effects. A major portion of current research has focused mainly on how first-generation immigrants integrate into the economic and social structure of the host country, despite the fact that the overall, long-term impact of immigration also depends on the adjustment process experienced by their children, often referred to as second-generation immigrants. In the context of current demographic trends and the role immigration plays in a number of developed countries, it is important to determine how both first and second-generation immigrants integrate and perform in host countries. Surprisingly, the research on the integration of the children of immigrants has been rather limited and many issues that are consequential to the immigration debate remain unaddressed.

One of the issues that has so far received only limited attention is the schooling attainment of second-generation immigrants. Considering that education is a strong determinant not only of subsequent labor market experiences but of successful social and economic integration in general, it is essential to study how children of immigrants differ in their educational attainments from the children of Canadian-born parents in order to evaluate past and current immigration policies. Although the existing literature is still rather sparse, a few recent studies looked at how children of immigrants fare in terms of education and labor market outcomes in comparison with their parents as well as with similarly-aged children of domestic-born parents.

For example, Borjas (1992, 1994), while focusing on intergenerational transfer of ethnic capital, summarized a number of observations about second-generation immigrants in the United States. He found substantial improvements across generations but also identified a large dispersion in educational attainment, as well as wages and occupational prestige scores, across different ethnic groups.

An explicit comparison between second-generation immigrants and similarly-aged children of German-born parents was the focus of Gang and Zimmermann (2000) who used data from the German Socio-Economic Panel to investigate the effects of parental education on a child's schooling, and to identify whether there were differences in educational attainment between second-generation immigrants, divided into five major ethnic groups, and native Germans of the same age. They found that the educational level of first-generation immigrants had no effect on the educational attainment of their children, while in the case of native-born Germans, parental education had an effect on the schooling of the progeny. They also detected a convergence in education between the children of immigrants and those born to Germans, but concluded that ethnic differences persisted within one's educational cohort even after controlling for parental human capital and other characteristics.

Another study by Riphahn (2003) analyzed the educational attainment of German-born children of immigrants using German Census data. She found that the educational outcomes of second-generation immigrants were significantly below that of natives and that even after controlling for various characteristics the overall educational gap between the children of immigrants and native Germans not only remained significant but actually widened over time.

Van Ours and Veenman (2003), using Dutch data, compared second-generation immigrants, divided into four major ethnic groups, both with first-generation immigrants and with natives of the same age group. They found that the differences in educational attainment which appeared in the data were largely driven by the differences in parental education rather than by ethnicity. In other words, the children of immigrants were worse off in terms of schooling because their parents had, on average, lower education than the parents of the natives. Van Ours and Veenman concluded that if these differences were taken into account, the gap between the native Dutch people and the second generation immigrants would to a large extent vanish.

More recently, Dustmann and Theodoropoulos (2006) used 1979 to 2005 data from the British Labour Force to investigate educational attainment and economic behavior of ethnic minority immigrants and their children in Britain. They found that the second-generation ethnic minorities were on average more educated than their parents as well as than a comparable group of white natives. They, however, appeared to have lower employment probabilities than their British-born white peers. Dustmann and Theodoropoulos also report significant differences across immigrant/ethnic groups and genders.

Evidence on the performance of second-generation immigrants in comparison with similarly aged offsprings of non-immigrant parents differs substantially across countries, with U.S. and Canadian studies mostly presenting a more optimistic picture than European ones. For example, using the U.S. Census data, Card et al. (2000) found that children of immigrants had higher education and wages than children of non-immigrants even after controlling for parental background. Similarly for Canada, Aydemir, Chen and Corak (2006) reported that second-generation immigrants had the educational attainments and labor market outcomes no worse, and in many ways better than those born to Canadian parents.

Aydemir and Sweetman (2006) examined differences in the characteristics and outcomes of first, second and third-generation immigrants to Canada and the United States. Using a sample from the 2001 Canadian Census and the data from 1998-2004 U.S. CPS, they found that immigrants to Canada had, on average, more years of schooling than the third generation while for the United States the opposite was true. Second-generation immigrants in both countries appeared to have accumulated more years of schooling than the third generation although the difference was reversed in Canada when ethnicity and geography were controlled for. While Aydemir and Sweetman considered educational differences across the three different immigrant groups (first-, second- and third-generation immigrants), a major limitation of their paper was their use of the census data. The Census does not contain information on various family and socio-economic characteristics (education of the parents, number siblings, etc.) that are known to significantly influence individuals' educational outcomes.

Worswick (2004), focused on differences in school outcomes using the data from three cycles of the National Longitudinal Survey of Children and Youth in Canada. He found that the children of immigrants had test scores in reading and mathematics comparable to the scores of the children of Canadian-born parents. He also found that children with a foreign mother tongue had low performance in vocabulary before age six but their performance in mathematics and reading was on a par with that of the children of the Canadian-born at the age of 14, which may indicate a convergence in school outcomes as children moved through the Canadian educational system.

It has been recognized that acquiring a level of education equivalent to that of domestic population is one of the key elements that determines how immigrants and their children integrate into the economic and social structures of the host country. This paper addresses the issue by focusing on the schooling attainment of second-generation immigrants in Canada. Using data from the 2001 General Social Survey (GSS), a sample of males and females between 16 and 65 years of age was analyzed to provide a comparison of the schooling attainment of children of immigrants to Canada with similarly-aged children of Canadian-born parents.

In the analysis, two definitions of what constitutes a second-generation immigrant were employed. The first definition considered a Canadian resident to be a second-generation immigrant if at least one of his/her parents was a foreign-born immigrant. This appears to be the definition most commonly used in the previous literature. The second definition was stricter as it required that both parents were foreign-born for an individual to be defined as a second-generation immigrant. The use of two alternative definitions, as well as accounting for other characteristics such as mother tongue, parental education, family environment, etc., allowed to assess the importance of observable individual differences on schooling attainments.

For the purpose of this study, four levels of education were distinguished and a set of ordered-choice models was estimated. In contrast with most European studies, and in concordance with studies based on U.S. and Canadian data, the results suggest that the children of immigrants did better in terms of educational attainment than their native Canadian counterparts even when the effects of selected individual characteristics were controlled for.

The paper is organized in the following way: Section 2 describes the data and the variables used in the analysis. Section 3 specifies the econometric model and provides a brief introduction to the methodology. Section 4 presents and discusses the results, and, finally, Section 5 concludes the paper.

2. The Data

The sample used in this study was extracted from the General Social Survey (GSS), a program established in 1985 with main objectives being the collection of data on social trends, changes in living conditions and well-being of Canadians, and the supply of information on specific social policy issues or emerging interests. The GSS collects data over a 12-month period from the total population of 15 years of age and older, living in private households in the ten provinces of Canada. The survey excludes individuals living on the reserves and in the Territories, full-time members of the armed forces and institutionalized persons.

For this study, I used the 2001 GSS (cycle 15) public use microdata files. This particular cycle of GSS focused on issues of family history, and collected information from approximately 25,000 respondents during the period from February to December 2001. After imposing age restrictions, excluding all first-generation immigrants except those who arrived in Canada at a young age (9 years old or younger) and after removing missing entries, the actual sample consisted of 12,018 individuals. This sample represents the population of over 12 million Canadian residents (51% males and 49% females), who were between 16 and 65 years of age in 2001.

2.1   Definitions of the Variables

Prior to any analysis, it is necessary to define what constitutes a second-generation immigrant. The definitions of a second-generation immigrant employed in existing literature vary substantially mainly due to legal and other differences across countries whose data were subjected to analyses. In this study, two definitions of what constitutes a second-generation immigrant were used:

- A *definition-1 second-generation immigrant* was defined as an individual born in Canada whose at least one parent was a foreign-born immigrant; and

- A *definition-2 second-generation immigrant* was a Canadian-born individual whose both parents were foreign-born immigrants.

Individuals raised by two immigrant parents may be substantially different in a number of ways from the domestic population. This, however, may not be the case if an individual has only one immigrant parent as this parent's influence may be diluted or even eliminated by the influence of the other, non-immigrant parent. The use of the definition 2 effectively excludes such mitigating effect.

Furthermore, young immigrants – the first-generation immigrants who arrived in Canada at the age of 9 or younger – were also included among the second-generation immigrants. Although there is no clear consensus over the cut-off age, it is often set to the age from which children start their elementary education. This reflects the hypothesis that if immigrant children enter the host country's schooling system early in life, differences and disadvantages they may have with respect to non-immigrants can be eliminated as they progress through the system.[1]

This study focused on the highest level of education – a variable that could take on one of four mutually exclusive and ordered categories: less than high school, high school graduate, some post-secondary education (below university), and a university degree. Furthermore, as the sample also contained very young individuals, an indicator for censored observations had to be used to distinguish those who were still in school at the time of the survey (and for whom the final schooling attainment had not yet been observed) from those who had already completed their schooling.

In the literature, having a foreign mother tongue is often reported to have a negative effect on the child's schooling outcomes. To study the effect of mother tongue, indicators were specified to distinguish the individuals whose first childhood language was only a foreign one from those who only spoke French or English and from those who spoke two or more languages.

Besides the parental education and foreign mother tongue indicators, other variables that are generally thought to influence an individual's schooling attainment were also included. Thus, family size and structure were controlled for by including the number of siblings, an indicator for children raised in a complete two-parent family, and an indicator for adopted children. Two more variables – mother worked full-time and father worked full-time during respondent's childhood – were then added to account for mother's and father's labor force status and work intensity, and to approximate household constraints in terms of time that the parents could devote to child-rearing as well as family income (with the father's work income presumably the largest fraction of it). Other individual differences, such as being raised in a rural area, the region of birth, and the age category were also controlled for by the inclusion of appropriate indicators.[2]

Although it may seem surprising at first, no control for ethnic background was included. There was no variable in the 2001 GSS public use files that could be used to construct ethnicity indicators. It was only possible to determine whether the sampled individuals and their parents were born in Canada, Europe or some other (unspecified) place, and what was their past and current immigrant status. Nevertheless, the information on the ethnic background was not crucial to the analysis. Given the dynamics of immigration to Canada, most second-generation immigrants in the 2001 GSS sample were still descendants of European immigrants.[3] Although

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[1] Given the age-at-immigration categories in GSS, the choice of the cut-off was either 4 or 9 years of age. Suprisingly, neither the choice of the cut-off, nor complete exclusion of young immigrants from the sample changed the estimation results. It was, nevertheless, convenient to include young immigrants to extend the size of the sample.

[2]   Eleven birth regions were defined: ten representing the provinces of Canada, and the eleventh being defined as "outside Canada" in order to control for the birthplace of the young immigrants in the sample. Ten age categories were used to cover the age distribution from 16 to 65 years of age.

[3] In the 2001 GSS sample, over 70% of immigrant parents were from Europe. Differentiating between the second-generation immigrants with European background and those with non-European ancestry did not produce a significant impact on schooling attainment. Consequently, the corresponding indicator was dropped from the regression.

differences across individuals with ancestry from different parts of Europe surely existed, the ethnic background was still more homogenous than not and, consequently, the ethnic background did not seem to matter much in explaining differences in educational outcomes.

2.2 The Sample Composition

As can be seen in Table 1, the distributions of selected characteristics were quite similar for both men and women. The definition-1 and definition-2 second-generation immigrants made up over 23% and 13% of the two subpopulations, respectively. There were also over 4% of immigrants who arrived in Canada at the age of 9 or younger. More than 13% of women and almost 12% of men were still in school at the time of the survey. About 6.5% of individuals only spoke a language other than English or French in their childhood years, a majority of all respondents, more than 87%, were raised in a complete, two-parent family in which most fathers (around 97%) and almost 30% of mothers worked full-time. Less than one third of the individuals grew up in a rural area.

Table 1 Percentage Distributions of Selected Observable Characteristics					
		Males		Females	
		Children of the Canadian-born	Second-gen. immigrants	Children of the Canadian-born	Second-gen. immigrants
Sample based on definition 1 of second-gen. immigrants (At least one parent immigrant)	Still in school	11.1	14.2	13.1	16.6
	Foreign mother tongue	1.2	23.8	1.1	24.1
	Adopted	1.0	1.1	1.4	1.5
	Complete family	88.8	88.4	85.8	88.4
	Father worked F/T	97.4	98.5	96.8	97.3
	Mother worked F/T	25.7	34.5	28.2	35.0
	Born in rural area	33.6	15.3	34.9	18.3
Sample based on definition 2 of second-gen. immigrants (Both parents immigrants)	Still in school	11.3	15.2	13.1	18.7
	Foreign mother tongue	1.4	38.4	1.4	39.7
	Adopted	1.1	0.7	1.5	1.1
	Complete family	88.4	90.8	85.9	89.7
	Father worked F/T	97.5	98.6	96.8	97.6
	Mother worked F/T	26.2	37.9	28.5	38.4
	Born in rural area	32.2	10.8	33.7	13.4

In the 2001 GSS sample, how did the distributions of major characteristics differ between the second-generation immigrants and the children of the Canadian-born parents? First we look at the differences in schooling attainment of the sampled males as well as that of their parents as presented in Table 2 - Table 4. Both definition-1 and definition-2 second-generation immigrant males appeared to be less represented in the two lowest schooling levels than the sons of the Canadian-born, but more concentrated in the highest category (university graduates). Their immigrant fathers and, to a lesser extent, also their mothers were less represented in the lowest schooling level (below high school), and more among the university graduates when compared to the Canadian-born parents.

Table 2					
Percentage Distributions of Educational Attainment: GSS Respondents					
		Males		**Females**	
	Level of schooling	**Children of the Canadian-born**	**Second-gen. immigrants**	**Children of the Canadian-born**	**Second-gen. immigrants**
Sample based on definition 1 of second-gen. immigrants (At least one parent immigrant)	l.t. high school	17.8	13.8	14.7	11.5
	high school	18.3	16.6	20.2	16.6
	some PSE	41.9	37.5	44.4	42.3
	university	21.9	32.1	20.8	29.6
Sample based on definition 2 of second-gen. immigrants (Both parents immigrants)	l.t. high school	17.8	11.1	14.3	11.5
	high school	18.2	16.7	20.3	13.1
	some PSE	41.7	42.6	43.9	43.9
	university	22.4	29.7	21.5	31.5

Table 3					
Percentage Distributions of Educational Attainment: Fathers of GSS Respondents					
		Males		**Females**	
	Level of schooling	**Canadian-born fathers**	**Second-gen. immigrant fathers**	**Canadian-born fathers**	**Second-gen. immigrant fathers**
Sample based on definition 1 of second-gen. immigrants (At least one parent immigrant)	l.t. high school	50.8	42.3	50.5	40.7
	high school	21.8	20.8	21.0	19.9
	some PSE	14.0	16.0	15.6	18.5
	university	13.5	20.9	12.9	21.0
Sample based on definition 2 of second-gen. immigrants (Both parents immigrants)	l.t. high school	48.8	39.0	49.7	38.0
	high school	21.7	22.2	21.0	18.9
	some PSE	15.5	16.6	15.5	21.6
	university	14.0	22.1	13.8	21.5

Table 4
Percentage Distributions of Educational Attainment: Mothers of GSS Respondents

		Males		Females	
	Level of schooling	Canadian-born mothers	Second-gen. immigrant mothers	Canadian-born mothers	Second-gen. immigrant mothers
Sample based on definition 1 of second-gen. immigrants (At least one parent immigrant)	l.t. high school	41.4	36.4	43.8	37.5
	high school	31.4	32.2	27.1	26.1
	some PSE	16.0	17.3	19.1	21.1
	university	11.2	14.0	10.0	15.3
Sample based on defitinion 2 of second-gen. immigrants (Both parents immigrants)	l.t. high school	39.9	38.6	42.4	42.1
	high school	31.5	32.0	27.4	23.3
	some PSE	17.1	15.4	19.5	20.2
	university	11.5	14.1	10.7	14.4

Very similar differences in the parental and individual's own education were also found between the daughters of immigrants and the daughters of the Canadian-born (Table 2 to Table 4). Furthermore, these differences, across both sexes as well as across the two definitions of second-generation immigrants, were statistically significant. It appears that the children with immigrant background did somewhat better in terms of schooling attainment than the children of the Canadian-born, and had parents who were generally more educated than their domestic counterparts.

Finally, going back to Table 1, we can see how selected observable characteristics were allocated across the two second-generation immigrant definitions. In all subsamples, the children of immigrants and the children of Canadian-born parents were similarly represented among adopted children, and among those who grew-up in complete families. The mothers of the second-generation immigrants were more likely to work full-time during their child's childhood than the Canadian-born mothers, while there was virtually no difference between the fathers of second-generation immigrants and the others as the majority of them worked full-time. Second-generation immigrants were somewhat more represented among the individuals who were still students when the survey was conducted. Finally, a substantial fraction of the second-generation immigrants spoke foreign mother tongue during their childhood (only about 1% of the children born to non-immigrants, while about 24% of the definition-1 and over 38% of the definition-2 second-generation immigrants did).

3. Model Specification and Methodology

The model is a version of the ordered-probit model with adjustments for right-censored observations, and it is based on the following latent-variable specification. An individual's preference for education, Y_i^* relates to a number of personal, family and other factors in $\mathbf{x}_i$:

$$y_i^* = \mathbf{x}_i'\boldsymbol{\beta} + \varepsilon_i, \ i = 1,\ldots,n,$$

where n denotes the number of individuals in the sample, $\boldsymbol{\beta}$ the vector of coefficients corresponding to the explanatory variables in $\mathbf{x}_i$, and ε_i is the stochastic error term. In the sample, the actual value of Y_i^* is unobserved and, instead, has to be linked to the individual's actual (observed) level of education Y_i There are four such levels: less than high school (0), high school (1), beyond high school but less than university (2), and a university degree (3), and

$$y_i = \begin{cases} 0 & \text{if} \quad y_i^* \leq \mu_1 \\ 1 & \text{if} \quad \mu_1 < y_i^* \leq \mu_2 \\ 2 & \text{if} \quad \mu_2 < y_i^* \leq \mu_3 \\ 3 & \text{if} \quad y_i^* > \mu_3 \end{cases},$$

The parameters μ_1 to μ_3 are unknown "thresholds" that need to be estimated along with the coefficients in $\boldsymbol{\beta}$.

For individuals who were still in school at the time of the survey and whose schooling spell had not yet been completed, there was no reason to presume that the level of education they had completed was also their final one. For these right-censored cases, we only know that their desired educational attainment y_i^* always exceeds the cut-off point that defines the level of education they had completed by the year 2001. That is,

$$y_i = \begin{cases} 0 & \text{if} \quad y_i^* > -\infty \\ 1 & \text{if} \quad y_i^* > \mu_1 \\ 2 & \text{if} \quad y_i^* > \mu_2 \\ 3 & \text{if} \quad y_i^* > \mu_3 \end{cases}$$

These decision rules allow for the formulation of the schooling attainment probabilities and likelihood function. Let $c_i = 1$ if the individual i was still in school (right-censored spells), and 0 if he/she had already completed schooling by the time of the survey, and assume that stochastic disturbances ε_i in the latent-variable equation are IID standard normal with distribution function $\Phi(\cdot)$.[4] Then, for the uncensored observations, the schooling attainment probabilities are:

$$\Pr(y_i = 0 \mid \mathbf{x}_i, c_i = 0) = \Phi(\mu_1 - \mathbf{x}_i'\boldsymbol{\beta})$$
$$\Pr(y_i = 1 \mid \mathbf{x}_i, c_i = 0) = \Phi(\mu_2 - \mathbf{x}_i'\boldsymbol{\beta}) - \Phi(\mu_1 - \mathbf{x}_i'\boldsymbol{\beta})$$
$$\Pr(y_i = 2 \mid \mathbf{x}_i, c_i = 0) = \Phi(\mu_3 - \mathbf{x}_i'\boldsymbol{\beta}) - \Phi(\mu_2 - \mathbf{x}_i'\boldsymbol{\beta})$$
$$\Pr(y_i = 3 \mid \mathbf{x}_i, c_i = 0) = 1 - \Phi(\mu_3 - \mathbf{x}_i'\boldsymbol{\beta})$$

and, for the censored observations,

$$\Pr(y_i = 0 \mid \mathbf{x}_i, c_i = 1) = 1$$
$$\Pr(y_i = 1 \mid \mathbf{x}_i, c_i = 1) = 1 - F(\mu_1 - \mathbf{x}_i'\boldsymbol{\beta})$$
$$\Pr(y_i = 2 \mid \mathbf{x}_i, c_i = 1) = 1 - F(\mu_2 - \mathbf{x}_i'\boldsymbol{\beta})$$
$$\Pr(y_i = 3 \mid \mathbf{x}_i, c_i = 1) = 1 - F(\mu_3 - \mathbf{x}_i'\boldsymbol{\beta})$$

For every person $i = 1,\ldots,n$, the individual log-likelihood function is then

$$\ln L_i(\boldsymbol{\theta} \mid \text{data}_i) = \sum_{j=0}^{3} d_{j,i}(1 - c_i)\ln\Pr(y_i = j \mid \mathbf{x}_i, c_i = 0) + d_{j,i}c_i \ln\Pr(y_i = j \mid \mathbf{x}_i, c_i = 1),$$

where $\boldsymbol{\theta}$ is the vector of all parameters to be estimated (μ's and β's), c_i is the indicator for censored observations, and $d_{j,i}$ equals one if the individual i had completed the jth level of education and zero if otherwise. The construction of the aggregate log-likelihood function from the individual contributions is straightforward, and the estimates of the parameters are obtained by maximizing this likelihood function.

The usefulness of parameter estimates in ordered-choice models is only limited. In order to assess the actual effects of selected variables, we need to calculate marginal effects. As the variables of interest in here are dichotomous, their marginal effects are simply probability differences, and as such they are nonlinear functions of $\hat{\boldsymbol{\theta}}$. Thus, the delta method has to be used for the calculation of their (asymptotic) errors.[5]

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[4] With this specification of the distribution of the errors, the model becomes a version of the ordered-probit model adjusted to account for censored observations.
[5] See e.g. Greene (2003).

Alhough discrete-choice models such as the ordered-probit produce no natural counterpart to the R-squared, many alternatives have been suggested in the literature, some of them more suitable than others depending on circumstances. Three of such measures were used in this paper; one is the commonly used McFadden's (1974) likelihood ratio index, and the other two are the pseudo-R-squares proposed by Veall and Zimmermann (1996) and Zavoina and McKelvey (1975).[6] The preferred measure in the context of this study was the Zavoina and McKelvey's one, with Veall and Zimmermann's measure giving essentially the same answer regarding the fit of the models in consideration. McFadden's measure tended to be substantially lower, but exhibited the same dynamics as the other two when variables were being added sequentially.

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[6] See Veall and Zimmermann (1996).

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4. Estimation Results

When summarizing estimation results from an ordered-choice model, one cannot entirely rely on the coefficient estimates. Generally, the signs of the coefficients only directly relate to the changes in the conditional probabilities of the lowest and the highest schooling levels, and what happens to the probabilities of attaining the schooling levels in between is ambiguous. Therefore, in order to assess the impact of the variables of interest on schooling, I also computed and analyzed selected marginal effects (differences in probabilities).

This section first reports and discusses the estimation results for the sample of males under the definition 1 of second-generation immigrant (at least one foreign-born parent), and then continues with the same analysis for the sample of males but under the definition 2 of second-generation immigrant (both parents foreign-born immigrants). Finally, the results from the sample of females (again for both definitions of second-generation immigrants) are compared to those from the sample of males.

Each of the following analyses begins with the presentation of the results from a series of ordered-probit regressions. Starting with the most parsimonious model that only contains the indicator for second-generation immigrants, five more models were then estimated, each of them utilizing more regressors than the previous one. Such an approach in which explanatory variables are added sequentially is a simple way of assessing their relative contribution to explaining observed differences in individual schooling attainment. The focus was on the changes in the coefficient estimates when an additional variable or a block of variables were added to the regression, and on the improvements in the goodness-of-fit measured by selected pseudo-R2 statistics. The choice of explanatory variables was based on existing theories as well as on empirical studies of educational attainment, and was refined on statistical grounds. Ultimately, this approach, along with the usual tests for overfitting, also allowed me to define a comprehensive set of variables that are significant in explaining individual differences in schooling attainment.

Using the estimates from the fully-specified regression model, the effects of selected factors that affect schooling attainment are also discussed. Finally, a detailed examination of the effects of second-generation immigrant status, foreign mother tongue, and their interactions concludes the analysis.

4.1   Results: Males, Definition 1 of Second-Generation Immigrant Applies

In Table 5, starting with the simplest version of the regression model, the effect of being a second-generation immigrant on the preference for education and, by implication, on educational attainment, is positive and statistically significant.[7] The fit of this baseline model is, unsurprisingly, rather poor, but it improved as the set of explanatory variables gradually expanded. From the pseudo-R^2 measures in Table 5 we can see that the major

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[7]   Throughout this study the level of significance is 5%, unless stated otherwise.

increases in the goodness-of-fit were brought about first by accounting for parental education, and later by including controls for family type and size (complete family, adopted child, number of siblings), labor-force status of the parents, and the indicator for living in a rural area.

	(1) Baseline	(2)	(3)	(4)	(5)	(6) Full spec.
Table 5 **Ordered-Probit Estimates: Males, Definition 1 Second-Generation Immigrants Applied**						
Second-gen immigrant	0.18 (4.85)	0.18 (4.66)	0.14 (3.62)	0.13 (3.30)	0.11 (2.70)	0.11 (2.59)
Father's education						
High school graduate		0.22 (5.45)	0.23 (5.61)	0.19 (4.56)	0.16 (3.87)	0.16 (3.87)
Some PSE		0.42 (8.90)	0.43 (9.03)	0.39 (8.13)	0.37 (7.62)	0.37 (7.62)
University graduate		0.78 (14.44)	0.79 (14.60)	0.76 (13.92)	0.72 (12.97)	0.72 (12.97)
Mother's education						
High school graduate		0.25 (6.58)	0.26 (6.80)	0.23 (5.95)	0.23 (5.90)	0.23 (5.89)
Some PSE		0.40 (8.16)	0.42 (8.42)	0.41 (8.18)	0.41 (8.16)	0.41 (8.15)
University graduate		0.60 (10.19)	0.61 (10.37)	0.59 (9.92)	0.60 (10.01)	0.60 (10.01)
Foreign mother tongue			0.21 (3.12)	0.19 (2.80)	0.19 (2.87)	0.15 (0.99)
Complete family				0.21 (4.40)	0.23 (4.69)	0.23 (4.68)
Adopted				-0.32 (-2.20)	-0.31 (-2.13)	-0.31 (-2.12)
Father worked full time				0.24 (2.60)	0.23 (2.42)	0.23 (2.41)
Mother worked full time				-0.03 (-0.76)	-0.03 (-0.90)	-0.03 (-0.91)
No. of siblings				-0.10 (-10.01)	-0.10 (-9.08)	-0.10 (-9.07)
Lived in rural area					-0.18 (-5.43)	-0.18 (-5.42)
Sec.gen. immig. × Foreign m. tongue						0.05 (0.32)
Log-likelihood	-7,203.3	-6,893.5	-6,888.6	-6,815.0	-6,800.3	-6,800.2
McFadden's R^2	0.027	0.069	0.070	0.080	0.082	0.082
Veal & Zimmermann's R^2	0.087	0.203	0.204	0.229	0.234	0.234
Zavoina & McKelvey's R^2	0.077	0.196	0.203	0.210	0.232	0.232
Note: z-statistics in parentheses. All models also included controls for age and the province of residence. Coefficient estimates for these controls and the estimates of the cut-off points not reported in order to keep the result table uncluttered.						

	(1) Baseline	(2)		(3)		(4)		(5)		(6) Full spec.	
Table 6 Ordered-Probit Estimates: Males, Definition 2 Second-Generation Immigrants Applied											
Second-gen. immigrant	0.24 (4.77)	0.28	(5.54)	0.23	(4.19)	0.21	(3.75)	0.18	(3.22)	0.18	(3.15)
Father's education											
High school graduate		0.22	(5.43)	0.23	(5.56)	0.19	(4.51)	0.16	(3.83)	0.16	(3.83)
Some PSE		0.42	(8.91)	0.43	(9.01)	0.39	(8.12)	0.37	(7.60)	0.37	(7.59)
University graduate		0.78	(14.39)	0.79	(14.51)	0.76	(13.84)	0.71	(12.90)	0.71	(12.88)
Mother's education											
High school graduate		0.26	(6.78)	0.27	(6.90)	0.24	(6.04)	0.23	(5.98)	0.23	(5.98)
Some PSE		0.42	(8.44)	0.43	(8.58)	0.42	(8.33)	0.42	(8.28)	0.42	(8.28)
University graduate		0.61	(10.37)	0.62	(10.47)	0.60	(10.01)	0.60	(10.09)	0.60	(10.09)
Foreign mother tongue				0.16	(2.28)	0.15	(2.08)	0.16	(2.19)	0.18	(1.35)
Complete family						0.21	(4.27)	0.22	(4.57)	0.22	(4.57)
Adopted						-0.32	(-2.16)	-0.31	(-2.10)	-0.31	(-2.10)
Father worked full time						0.24	(2.54)	0.22	(2.37)	0.22	(2.38)
Mother worked full time						-0.03	(-0.78)	-0.03	(-0.92)	-0.03	(-0.92)
No. of siblings						-0.10	(-10.05)	-0.10	(-9.11)	-0.10	(-9.11)
Lived in rural area								-0.18	(-5.42)	-0.18	(-5.43)
Sec.gen. immig. × Foreign m. tongue										-0.03	(-0.21)
Log-likelihood	-7,203.6	-6,888.9		-6,886.3		-6,813.4		-6,798.7		-6,798.7	
McFadden's R^2	0.027	0.070		0.070		0.080		0.082		0.082	
Veal & Zimmermann's R^2	0.087	0.204		0.205		0.229		0.234		0.234	
Zavoina & McKelvey's R^2	0.076	0.204		0.209		0.214		0.231		0.231	

Note: z-statistics in parentheses. All models also included controls for age and the province of residence. Coefficient estimates for these controls and the estimates of the cut-off points not reported in order to keep the result table uncluttered.

The addition of parental education on the right-hand side improved the fit of the model substantially while it neither elevated nor diminished the positive effect of the second-generation immigrant status. This certainly is an interesting outcome as one would expect some interaction between these variables. Similar studies have found that the effect of an immigrant background is often substantially mitigated or even eliminated once parental education is controlled for. Nonetheless, this was not the case in the Canadian context. As we can see from Table 5, even when all observable individual differences were controlled for, the effect of being second-generation immigrant on schooling remained positive and significant although lesser in magnitude compared to the baseline model. This, by itself, is an interesting result contradicting the findings of many previous studies of the issue.

Another, rather interesting pattern emerged from the results in Table 5. When an indicator for foreign mother tongue was included, the effect of being second-generation immigrant on schooling attainment remained positive but decreased substantially. This suggested a potential interplay between the two variables which was examined later in a greater detail. Furthermore, the effect of speaking only a foreign language during childhood on an individual's educational attainment was overall positive although ultimately not

statistically significant. This was yet another unexpected result. Generally, one would expect children whose first and only childhood language was neither English nor French to be disadvantaged at school. However, this result broadly coincides with the study by Worswick (2004). Using data from the National Longitudinal Survey of Children and Youth, Worswick found that children of immigrants whose first language was neither French nor English were at a substantial disadvantage in the early school years (lower vocabulary test scores), but that their performance in mathematics and reading was comparable to that of the children of Canadian-born parents by age fourteen.

As for the effects of the remaining regressors in the fully-specified model, they all had expected signs. Adopted children and those living in rural areas did worse in terms of schooling attainment as did children from larger families. These results were expected, and in line with current theories and empirical evidence. The negative effect of the mother working full-time on child's schooling outcome can be explained as an effect of lower investment into the child's quality, as mothers with jobs cannot devote as much time to their children as mothers who stay at home. The positive effect of the father working full-time most likely serves as a proxy for higher household income compared to the families in which the father did not work. The higher income presumably translates into a greater investment into children which, in turn, would be reflected in a higher schooling attainment.

In order to analyze the effects of second-generation immigrant status, foreign mother tongue, and their interactions, four probability differences were estimated, each of them representing a different type of the marginal effect depending on the actual or otherwise specified values of the second-generation immigrant status (denoted s) and the foreign mother tongue indicator (denoted f). The estimates are presented in Table 9 through to Table 12.

In this simplified notation, the first two average differences, $\Pr(y = j \mid s = 1) - \Pr(y = j \mid s = 0)$ and $\Pr(y = j \mid f = 1) - \Pr(y = j \mid f = 0)$, represent the overall effects of second-generation immigrant status and foreign mother tongue, respectively, on the probability of attaining the jth level of schooling.[8] The third difference, $\Pr(y = j \mid s = 1, f = 1) - \Pr(y = j \mid s = 1, f = 0)$, singles out the effect of foreign mother tongue among second-generation immigrants, while the fourth, $\Pr(y = j \mid s = 0, f = 1) - \Pr(y = j \mid s = 0, f = 0)$, does the same for the children of Canadian-born parents.

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[8]   For example, the average difference denoted in the text and tables as $\Pr(y = j \mid s = 1) - \Pr(y = j \mid s = 0)$ is in fact

$n^{-1} \sum_{i=1}^{n} \Pr(y_i = j \mid \mathbf{x}_i, f_i, s_i = 1) - \Pr(y_i = j \mid \mathbf{x}_i, f_i, s_i = 0)$. This is the difference, averaged over the sample of n individuals, in schooling attainment probabilities conditional on a specified value of second-generation immigrant status, and on the actual values of the foreign mother tongue indicator and all the other regressors in $\mathbf{x}_i$. The remaining four average probability differences were defined in a similar way.

Continuing the analysis of the definition 1 second-generation immigrant males, the estimates in Table 9 show that being a second-generation immigrant lowered the probabilities of attaining the two lower levels of schooling while increasing the probabilities of having the two higher ones. The effect was stronger for the probability of having less than high school education and for the probability of being a university graduate, while rather small for the two levels in between (high school graduate and some post-secondary education). Nevertheless, for all the schooling levels, the effect of immigrant background was significant at the 5% level.

The overall effect of a foreign mother tongue, as presented in Table 10, reveals a pattern very similar to the one for second-generation immigrant status. That is, having the first language different from the two official languages of Canada had a negative impact on the probabilities of having less than high school and a high school education, and a positive one on the probabilities of attaining higher education. However, in a statistical sense, this effect was not different from zero. Thus, individual differences in mother tongue generally could not account for differences in schooling attainment.

Testing the interactions between the second-generation immigrant status and the foreign mother tongue indicator produced rather interesting results. The estimates in Table 9 suggest that, in the case of the second-generation immigrants, having spoken only a foreign language during childhood was beneficial for their educational attainment. This conclusion runs contrary to the findings from similar studies as well as to conventional thinking. Given the importance of parental influence for a child's mental development, one would expect that if a child were only exposed to a foreign language in early stages of life, he or she would be predisposed to experience more difficulties at school than children from a similar immigrant background but with English or French as their mother tongue. Nevertheless, this was not observed in the sample of immigrant children.

If having a foreign mother tongue had a positive effect on educational attainment among second-generation immigrants, it seemed detrimental for the children born to Canadian parents. From Table 12, it appears that these individuals, when compared to the children of Canadian-born parents with English and/or French as the first language, were more likely to end up with lower levels of education and less likely to obtain schooling beyond high school. However, this negative effect of foreign mother tongue across children of Canadian-born parents was not statistically significant.

4.2 Results: Males, Definition 2 of Second-Generation Immigrant Applies

Even when the "stricter" definition of a second-generation immigrant was applied, which required that both parents were immigrants to Canada (definition 2), the coefficient estimates obtained from the sample of men and presented in table 6 still told a story very similar to the one above.

Firstly, the effect of the second-generation immigrant status on the preference for schooling was positive and statistically significant. The higher preference for schooling translated into the higher probability of attaining education beyond high school graduation as the estimated probability differences in Table 9 confirm. The effects of all the other regressors had the same direction and even quite similar magnitudes as those previously obtained for the sample of men under the definition 1 of second-generation immigrants. Thus, higher parental education translated into higher educational attainment of the children, as did favorable family environment approximated by the indicator for a complete family, and the lower financial constraints for families in which the father had a full-time job. As before, adopted children, children from larger families (those with more siblings), those who grew up in rural areas, as well as those whose mothers worked full-time had on average lower preference for schooling than children without these characteristics.

In Table 10, it appears that the overall effect of foreign mother tongue on an individual's education is mostly insignificant. Furthermore, the results in Table 11 and Table 12 suggest that having spoken only a foreign language during childhood does not account for differences in educational attainment across the definition 2 second-generation immigrants nor across the children of Canadian-born parents.

4.3   Differences between Males and Females

The estimates for the sample of females presented in Table 7 and Table 8 are quite similar, at least in their direction, to those for the sample of males. The effect of being a second-generation immigrant, irrespective of which of the two definitions applies, is also positive, albeit somewhat larger in magnitude than was the case for males. The effect of a foreign mother tongue, and its interaction with second-generation immigrant status appears to be statistically insignificant.

	(1) Baseline	(2)		(3)		(4)		(5)		(6) Full spec.	
Second-gen immigrant	0.27 (7.68)	0.25	(7.23)	0.22	(5.99)	0.20	(5.51)	0.19	(5.20)	0.17	(4.51)
Father's education											
High school graduate		0.26	(6.73)	0.26	(6.89)	0.24	(6.23)	0.23	(5.85)	0.23	(5.86)
Some PSE		0.37	(8.79)	0.38	(8.89)	0.35	(8.20)	0.34	(7.89)	0.34	(7.88)
University graduate		0.81	(16.23)	0.82	(16.35)	0.79	(15.75)	0.77	(15.14)	0.78	(15.21)
Mother's education											
High school graduate		0.29	(7.92)	0.30	(8.18)	0.26	(6.97)	0.25	(6.86)	0.25	(6.84)
Some PSE		0.45	(10.84)	0.46	(11.05)	0.44	(10.52)	0.44	(10.54)	0.44	(10.55)
University graduate		0.73	(13.26)	0.74	(13.43)	0.72	(12.99)	0.72	(13.04)	0.72	(13.01)
Foreign mother tongue				0.19	(3.08)	0.17	(2.81)	0.17	(2.77)	-0.24	(-1.67)
Complete family						0.10	(2.46)	0.12	(2.72)	0.11	(2.63)
Adopted						-0.47	(-3.96)	-0.47	(-4.01)	-0.48	(-4.02)
Father worked full time						0.23	(2.97)	0.22	(2.90)	0.21	(2.77)
Mother worked full time						-0.01	(-0.32)	-0.01	(-0.37)	-0.01	(-0.43)
No. of siblings						-0.09	(-9.88)	-0.09	(-9.44)	-0.09	(-9.34)
Lived in rural area								-0.10	(-3.20)	-0.09	(-3.04)
Sec.gen. immig. × Foreign m. tongue										0.50	(3.11)
Log-likelihood	-8,462.5	-8,025.8		-8,021.0		-7,952.0		-7,946.9		-7,942.1	
McFadden's R^2	0.056	0.105		0.106		0.113		0.114		0.114	
Veal & Zimmermann's R^2	0.167	0.285		0.287		0.303		0.304		0.305	
Zavoina & McKelvey's R^2	0.154	0.257		0.261		0.263		0.300		0.302	

Table 7
Ordered-Probit Estimates: Females, Definition 1 Second-Generation Immigrants Applied

Note: z-statistics in parentheses. All models also included controls for age and the province of residence. Coefficient estimates for these controls and the estimates of the cut-off points not reported in order to keep the result table uncluttered.

Table 8
Ordered-Probit Estimates: Females, Definition 2 Second-Generation Immigrants Applied

	(1) Baseline	(2)	(3)	(4)	(5)	(6) Full spec.
Second-gen immigrant	0.29 (6.22)	0.35 (7.42)	0.31 (5.82)	0.29 (5.54)	0.28 (5.24)	0.25 (4.52)
Father's education						
High school graduate		0.26 (6.72)	0.26 (6.84)	0.24 (6.16)	0.22 (5.78)	0.22 (5.78)
Some PSE		0.36 (8.61)	0.37 (8.71)	0.34 (8.01)	0.33 (7.71)	0.33 (7.72)
University graduate		0.82 (16.32)	0.82 (16.40)	0.80 (15.78)	0.77 (15.17)	0.77 (15.20)
Mother's education						
High school graduate		0.30 (8.29)	0.31 (8.42)	0.26 (7.18)	0.26 (7.06)	0.26 (7.04)
Some PSE		0.47 (11.17)	0.47 (11.28)	0.45 (10.72)	0.45 (10.74)	0.45 (10.73)
University graduate		0.74 (13.57)	0.75 (13.65)	0.73 (13.19)	0.73 (13.23)	0.73 (13.20)
Foreign mother tongue			0.14 (2.16)	0.12 (1.89)	0.12 (1.88)	-0.02 (-0.16)
Complete family				0.10 (2.34)	0.11 (2.61)	0.11 (2.59)
Adopted				-0.47 (-3.97)	-0.48 (-4.02)	-0.48 (-4.03)
Father worked full time				0.23 (2.96)	0.22 (2.89)	0.22 (2.85)
Mother worked full time				-0.01 (-0.30)	-0.01 (-0.35)	-0.01 (-0.38)
No. of siblings				-0.09 (-10.02)	-0.09 (-9.58)	-0.09 (-9.54)
Lived in rural area					-0.10 (-3.21)	-0.10 (-3.13)
Sec.gen. immig. × Foreign m. tongue						0.20 (1.45)
Log-likelihood	-8,472.6	-8,024.3	-8,022.0	-7,951.8	-7,946.7	-7,945.7
McFadden's R^2	0.055	0.105	0.106	0.113	0.114	0.114
Veal & Zimmermann's R^2	0.166	0.286	0.286	0.303	0.304	0.304
Zavoina & McKelvey's R^2	0.150	0.267	0.268	0.272	0.298	0.298

Note: z-statistics in parentheses. All models also included controls for age and the province of residence. Coefficient estimates for these controls and the estimates of the cut-off points not reported in order to keep the result table uncluttered.

The overall effect of second-generation immigrant status across the sample of females, as captured by the probability differences in Table 9, is very similar to the same effect over the sample of males. In fact, the direction of this effect is the same for both sexes, although slightly greater in magnitude for women.

Table 9
Estimated Average Difference $\Pr(\gamma = j \mid s = 1) - \Pr(y = j \mid s = 0)$
(Difference in probability of attaining jth level of schooling between the second-generation immigrants and the children of Canadian-born parents)

Level of schooling (*j*)	Defn. 1 second gen. immigrants applies				Defn. 2 second gen. immigrants applies			
	Males		Females		Males		Females	
Less than high school	-0.024	(-3.08)	-0.034	(-5.41)	-0.037	(-3.70)	-0.046	(-5.50)
High school graduate	-0.009	(-2.81)	-0.016	(-4.72)	-0.015	(-3.15)	-0.024	(-4.49)
Some post-secondary	0.008	(3.45)	0.012	(6.26)	0.010	(5.22)	0.014	(8.39)
University graduate	0.033	(2.90)	0.050	(4.87)	0.055	(3.28)	0.072	(4.62)

As for the effect of a foreign mother tongue, it is not statistically different from zero both overall and across the children of Canadian-born parents (Table 10 and Table 12), but it does matter for the schooling of second-generation immigrant females. Similarly to the results from the sample of males, and regardless which definition of second-generation immigrant was applied, female immigrant children appeared less likely to end up with only high-school or below high-school levels, while having a higher probability of attaining post-secondary education, including a university degree.

Table 10
Estimated Average Difference $\Pr(\gamma = j \mid f = 1) - \Pr(y = j \mid f = 0)$
(Difference in probability of attaining jth level of schooling between the individuals with foreign mother tongue and the individuals whose mother tongue was English/French)

Level of schooling (*j*)	Defn. 1 second gen. immigrants applies				Defn. 2 second gen. immigrants applies			
	Males		Females		Males		Females	
Less than high school	-0.031	(-1.40)	0.031	(1.19)	-0.033	(-1.59)	0.000	(-0.01)
High school graduate	-0.013	(-1.28)	0.008	(1.29)	-0.014	(-1.39)	0.000	(-0.06)
Some post-secondary	0.008	(1.63)	-0.021	(-1.29)	0.009	(2.35)	-0.001	(-0.10)
University graduate	0.048	(1.33)	-0.029	(-1.15)	0.051	(1.44)	0.002	(0.08)

Table 11
Estimated Average Difference $\Pr(\gamma = j \mid s = 1, f = 1) - \Pr(y = j \mid s = 1, f = 0)$
(Difference in probability of attaining jth level of schooling between second-generation immigrants with foreign mother tongue and second-generation immigrants whose mother tongue was English/French)

Level of schooling (*j*)	Defn. 1 second gen. immigrants applies				Defn. 2 second gen. immigrants applies			
	Males		Females		Males		Females	
Less than high school	-0.035	(-2.89)	-0.037	(-4.05)	-0.024	(-1.79)	-0.025	(-2.40)
High school graduate	-0.018	(-2.63)	-0.025	(-3.70)	-0.013	(-1.73)	-0.018	(-2.36)
Some post-secondary	0.005	(2.34)	0.003	(1.45)	0.001	(0.67)	0.000	(0.15)
University graduate	0.063	(2.66)	0.075	(3.70)	0.046	(1.74)	0.055	(2.35)

	Table 12

Table 12
Estimated Average Difference $\Pr(\gamma = j \mid s = 0, f = 1) - \Pr(y = j \mid s = 0, f = 0)$
(Difference in probability of attaining j[th] level of schooling between children of Canadian-born parents with foreign mother tongue and children of Canadian-born parents whose mother tongue was English/French)

	Defn. 1 second gen. immigrants applies				Defn. 2 second gen. immigrants applies			
Level of schooling (j)	**Males**		**Females**		**Males**		**Females**	
Less than high school	-0.029	(-1.06)	0.052	(1.55)	-0.034	(-1.46)	0.004	(0.16)
High school graduate	-0.012	(-0.92)	0.016	(2.09)	-0.014	(-1.26)	0.001	(0.16)
Some post-secondary	0.009	(1.48)	-0.028	(-1.37)	0.010	(2.33)	-0.002	(-0.16)
University graduate	0.043	(0.95)	-0.058	(-1.82)	0.052	(1.29)	-0.005	(-0.16)

Note: z-statistics in parentheses. s and f represent the indicators for second-generation immigrants and for foreign mother tongue, respectively.

5. Summary and Conclusion

The focus of this paper has been on the educational attainment of second-generation immigrants in comparison with similarly-aged offsprings of Canadian-born parents. Despite the policy relevance of questions regarding the integration of immigrant children into the economy and society of the host country, researchers have so far paid much more attention to the adjustment process experienced by their parents, the first-generation immigrants.

For the purpose of this paper, a sample of Canadian males and females between 16 and 65 years of age was extracted from the cycle 15 of the 2001 General Social Survey, and two distinct definitions of what constitutes a second-generation immigrant were used. One definition regarded an individual as a second-generation immigrant if at least one of his/her parents was a foreign-born immigrant to Canada. The other definition was more restrictive as it required both parents to be foreign-born immigrants. Both definitions also included immigrants to Canada as long as they arrived in Canada at the age of 9 or younger (so called young immigrants).

In order to discern the impact of being a second-generation immigrant on schooling attainment, four levels of education were distinguished and a set of ordered-choice models was estimated in which the children of immigrants and similarly-aged children of Canadian-born parents were differentiated. For both the sample of males and the sample of females, the same set of models was estimated for the two chosen definitions of second-generation immigrants. In contrast with many previous studies, the results confirmed that the second-generation immigrants did better in terms of educational attainment than their peers born to Canadian parents, even when the effects of selected observable characteristics were controlled for. This result, despite some differences in the magnitude of the effect, held not only across the two definitions of second-generation immigrants but also across both genders.

The analysis of the effect of a foreign mother tongue showed an interesting interaction between the second-generation immigrant status and the first (and only) language spoken in childhood. From the data, it appears that a foreign language environment may have somewhat benefited the sons and daughters of immigrants. This effect, albeit rather small, was statistically significant. No such effect, however, was found for the children of Canadian-born parents.

The main findings of this study appear to be mostly in contrast with the current body of research on immigrant children. They suggest that the Canadian immigration system was able to select immigrants whose children did, in terms of educational attainment, at least as well as children of Canadian-born parents. The tribute should perhaps also be paid to the Canadian educational system. Even if second-generation immigrants may have faced disadvantages in early stages of their lives, these disadvantages seem to have been eliminated as the children advanced through the school system.

As for policy implications, our results suggest that second-generation immigrants were not, at least until recently, a group that would require special attention. In terms of schooling, they were doing very well even without any actions or policies targeted at them. This should not, however, lead to complacency. As mentioned before, ethnicity was excluded as an explanatory variable, since the second-generation immigrant sample is ethnically homogenous to a large degree, with a vast majority being from families who immigrated to Canada from Europe or the United States. Although not yet reflected in the data, this is no longer true. At present, the majority of new immigrants are arriving from non-European countries, with the immigration from Europe and the U.S. shrinking. The experience from other parts of the world suggests that such changes in ethnic composition of the immigrant flow could eventually be reflected in greater variability of the educational outcomes of immigrant children, perhaps with a substantial number of them being at risk of significantly lagging behind the general population. Thus, further examination of this issue will be needed once data availability permits.

Furthermore, even though in this paper the second-generation immigrants appeared to have done better in terms of schooling attainment than their counterparts from non-immigrant families, the question remains whether the advantage of higher education also translated into an adequate success in the labor market. That is, whether the Canadian economy provided enough opportunities for immigrant children to capitalize on their effort and achievement in school, and to fully utilize their potential.

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