

Economic and Social Reports

International students as a source of labour supply: Pre-immigration study in Canada and post-immigration earnings



by Eden Crossman and Feng Hou

Release date: February 23, 2022



Statistics
Canada

Statistique
Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

Email at infostats@statcan.gc.ca

Telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

- Statistical Information Service 1-800-263-1136
- National telecommunications device for the hearing impaired 1-800-363-7629
- Fax line 1-514-283-9350

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "Contact us" > "[Standards of service to the public](#)."

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Published by authority of the Minister responsible for Statistics Canada

© Her Majesty the Queen in Right of Canada as represented by the Minister of Industry, 2022

All rights reserved. Use of this publication is governed by the Statistics Canada [Open Licence Agreement](#).

An [HTML version](#) is also available.

Cette publication est aussi disponible en français.

International students as a source of labour supply: Pre-immigration study in Canada and post-immigration earnings

by *Eden Crossman and Feng Hou*

DOI: <https://doi.org/10.25318/36280001202200200004-eng>

Abstract

Although international students are increasingly considered a pool of skilled individuals for permanent residency and participation in the Canadian labour market, the role of Canadian study in economic outcomes after immigration is not well understood. To this end, this article examines the relationship between pre-immigration study in Canada and post-immigration earnings. Findings show a trend towards rising shares of economic immigrants with Canadian education. Over the 2000-to-2019 period, the share of new economic principal applicant immigrants with Canadian study experience increased from 6% to 38%. During the first two years after immigration, economic principal applicants with Canadian study experience earned considerably more than those who did not study in Canada. This advantage was due entirely to their better official language ability and much higher shares with pre-immigration Canadian work experience. When compared only with immigrants who had similar language profiles and pre-landing Canadian work experience, those with Canadian study experience earned significantly less, mostly because of their higher tendency to pursue further schooling in the initial years after immigration. While lower annual earnings in their first few years after immigration reflected their continued status as students, the benefit of Canadian study experience grew in the longer term. Ten to 11 years after immigration, economic principal applicant immigrants with at least one year of Canadian study experience had significantly higher earnings than those without such experience, regardless of whether they had pre-immigration Canadian work experience. The findings of this study suggest that for economic immigrants who are recent graduates and new entrants to the labour market, it takes some time to translate their Canadian credentials into stronger economic outcomes.

Authors

Eden Crossman is with the Research and Evaluation Branch at Immigration, Refugees and Citizenship Canada. Feng Hou is with the Social Analysis and Modelling Division, Analytical Studies and Modelling Branch, at Statistics Canada.

Acknowledgements

This study was conducted in collaboration with Immigration, Refugees and Citizenship Canada. The authors would like to thank Cédric de Chardon, Marc Frenette, Rebeka Lee, Katherine Wall and Linda Wang for their advice and comments on an earlier version of this paper.

Introduction

International students are increasingly viewed as a pool of skilled individuals to be tapped for permanent residency and the Canadian labour market. A recent Canadian government news release described international students as bringing “strong employment and language skills, bolstered by their Canadian education and work experience, so they are typically well positioned to apply for permanent resident status. More than 58,000 graduates successfully applied to immigrate permanently in 2019, and their decisions to stay in Canada will help to address our stark demographic challenges” (Government of Canada, 2021). To this end, international students in Canada are allowed to work while they study and, after completing their studies, to obtain a post-graduation work permit to gain Canadian work experience. They may then be eligible for permanent residency through one of several economic class immigration streams.

In a report that served as the technical background for the design of the Comprehensive Ranking System (CRS), principal applicants in the economic class with Canadian study experience were found to have lower earnings in the early years after immigration than other principal applicants with similar sociodemographic characteristics (Bonikowska et al., 2015). This finding, together with the observation that Canadian study experience accounted for little of the variation in the post-immigration earnings among immigrants, implied that Canadian study experience in and of itself is not necessarily an advantage for economic immigrants. Accordingly, no points were assigned to Canadian study experience in the first version of the CRS. Influenced by strong advocacy from the education sector and other stakeholders such as provinces, territories and employers, the Canadian government modified the CRS in November 2016 to include points for study in Canada above the high school level (Government of Canada, 2017). Specifically, the modified CRS awards 15 points for a one- or two-year diploma or certificate and 30 points for a degree, diploma or certificate of three years or longer, including a master’s, professional or doctoral degree, received in Canadian educational institutions. Even with this modification, Canadian study remains a minor selection criterion relative to other selection factors. For instance, the age factor can receive up to 110 points, educational level 150 points, official language ability 160 points and Canadian work experience up to 180 points if the applicant also holds an advanced degree and foreign work experience (Immigration, Refugees and Citizenship Canada, 2020).

Building on the above technical report, this article conducts additional analysis about the relationship between Canadian study experience before immigration and post-immigration earnings.¹ It aims to provide some possible explanations about why economic principal applicants with Canadian study experience earned less than other economic immigrants with similar sociodemographic characteristics in the initial years after immigration. It further examines whether Canadian study becomes more beneficial to immigrants’ stay in the longer term. The results of these analyses aim to improve on the current understanding of the role of Canadian study in immigrant economic integration.

The analysis focuses on principal applicants in five economic immigration programs: the Federal Skilled Worker Program (FSWP), Canadian Experience Class (CEC), Provincial Nominee Program (PNP), Quebec Skilled Worker Program (QSWP) and Federal Skilled Trades Program. These programs all select economic immigrants based on their potential ability to do well in the labour market, although they are administered differently and go through different processing queues. The study population for the multivariate analysis is restricted to people aged 20 to 44 at landing and those admitted between 2000 and 2016.² In the remainder of this article, these principal applicants are referred to simply as economic

-
1. This article is part of a series that provides a broad overview of international students as a source of labour. Other articles released in this series examine the trend in the number and characteristics of international students, the transition of international students to permanent residency, their retention in the province of study after graduation, and the labour market engagement of international students while they hold a study permit and during the period between graduation and becoming a permanent resident.
 2. The CRS assigns a score value of zero for 45 years of age or older.

immigrants. In analysis of employment earnings (annual wages or salaries and net self-employment income), the study population is further restricted to those who earned at least \$500 (in 2018 dollars) in the tax year.³ The data are drawn from the Longitudinal Immigration Database.

Rising share of economic immigrants with Canadian study experience

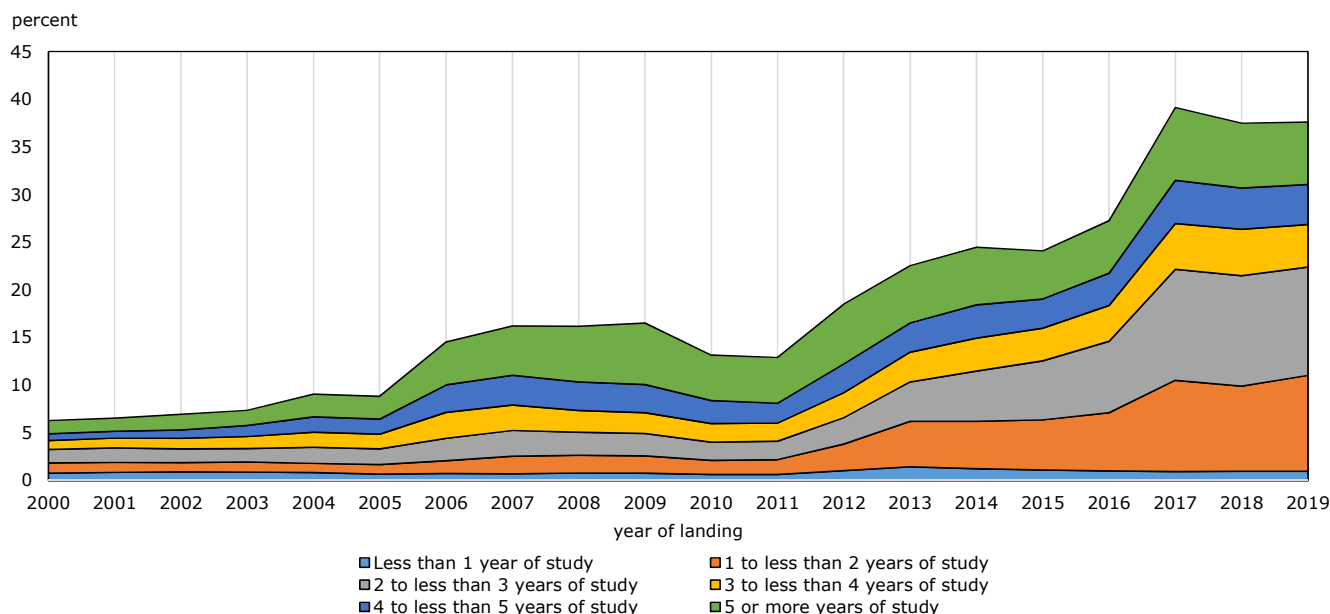
The share of economic immigrants with pre-immigration Canadian education has been rising. Chart 1 shows the share with Canadian study experience among economic principal applicant immigrants over the 2000-to-2019 period. In this study, Canadian study experience is defined as ever having held a study permit, and years of Canadian study experience are derived from the total duration of valid study permits an individual ever held before becoming a permanent resident.⁴

Since the early 2000s, proportionately more economic immigrants have had Canadian study experience before obtaining their permanent residence (Chart 1). In 2000, about 6% of newly admitted economic principal applicants were former study permit holders. This share increased to 39% in 2017 and slightly levelled off to 38% in 2019. This trend is consistent with the rising number of international students and their increased rate of transition to permanent residency (Crossman et al., 2021; Choi et al., 2021). In particular, the large increase after 2012 corresponded to a change in selection regulations in 2013, when Canadian education could receive up to 10 points (out of a total 100 points) under the adaptability factors in the FSWP. The sharp increase between 2016 and 2017 corresponded to the addition of points for Canadian education in the 2016 modification of the CRS.

3. Employers are required to file a T4 form for employees who earned over \$500 a year.

4. It is possible that some study permit holders never registered in a Canadian educational institution or did not register for the entire period of their valid study permits. Thus, the duration of valid study permits may overestimate an individual's actual duration of schooling in Canada. Although the Postsecondary Student Information System contains an identifier for international students among students registered with a Canadian public postsecondary institution, its linkage with the temporary residents file is not complete and cannot be used to verify whether a study permit holder actually registered with a public postsecondary institution. Furthermore, no known data sources are available on study permit holders studying at other types of institutions (e.g., private colleges or secondary or elementary schools).

Chart 1
Economic principal applicants with Canadian study experience, aged 20 to 44 at landing



Source: Statistics Canada, 2019 Longitudinal Immigration Database.

The immigration programs that admitted economic principal applicants with Canadian study experience also changed over time. In 2000, about 75% of economic immigrants with Canadian study experience were admitted through the FSWP; the share decreased drastically to 6% in 2019. Meanwhile, the share admitted through provincial programs (PNPs and the QSWP) increased from 22% in 2000 to 52% in 2019. Furthermore, the share admitted through the CEC increased from 14% in 2009—the first full year after the CEC was introduced to facilitate the transition of skilled temporary foreign workers and international students to permanent residency—to 40% in 2019. Clearly, provincial programs and the CEC have become the main avenues to admit economic immigrants with Canadian study experience.

Economic principal applicants with different years of study permits were more similar to each other than to those without Canadian study experience (Table 1). Compared with economic principal applicants without Canadian study experience, those with Canadian study experience were much younger, more likely to have a graduate degree, more likely to speak an official language and much more likely to have pre-immigration earnings in Canada. Among those with Canadian study experience, more years of study permits were generally associated with a higher concentration in the 25-to-29 age range, a higher percentage with at least a bachelor’s degree, a higher share with English or French as their mother tongue, a lower share without pre-immigration earnings in Canada⁵ and more average months of full-time postsecondary school attendance⁶ in the first full tax year after immigration.

5. Pre-immigration earnings in Canada were based on an individual’s maximum annual earnings in the 10 years before acquiring permanent residency. Maximum annual earnings are adjusted to 2018 constant dollars. An individual’s pre-immigration earnings were coded into different levels against national median employment earnings that were derived from the Longitudinal Administrative Databank for each tax year among workers aged 20 to 64 and with positive earnings. For example, the national median earnings (in 2018 constant dollars) were \$37,900 in 2000 and \$43,200 in 2016.

6. This variable was derived from the total educational deduction an individual claimed for a tax year, divided by the maximum amount that a person could claim for each month in a qualifying educational program.

Table 1
Sociodemographic characteristics of economic principal applicants aged 20 to 44 at landing, admitted from 2000 to 2016, by years of Canadian study experience

	No Canadian study experience	With Canadian study experience		
		Less than 2 years	2 to less than 4 years	4 years or more
		percent		
Women	29.8	35.3	35.9	39.6
Men	70.2	64.7	64.1	60.4
Age group				
20 to 24	1.8	11.0	14.7	11.1
25 to 29	22.2	53.1	55.5	58.5
30 to 34	34.3	23.9	21.1	21.9
35 to 44	41.7	12.1	8.6	8.6
Educational level				
Secondary or less	11.1	14.2	12.2	8.4
Trade certificate	5.8	4.9	3.7	1.7
Non-university postsecondary diploma	9.9	9.3	12.1	10.3
Bachelor's degree	48.5	43.9	35.5	49.5
Master's degree	21.3	26.1	34.9	26.0
Doctorate	3.4	1.6	1.6	4.1
Official language				
Not speaking English or French	10.2	2.2	1.8	2.0
Other mother tongue, English or French	73.4	81.4	81.5	79.2
Mother tongue English or French	16.4	16.5	16.7	18.9
Level of pre-immigration earnings				
No pre-immigration earnings	76.1	18.1	12.7	9.1
More than 0 to national median earnings	9.4	49.0	56.6	60.9
More than national median earnings	14.6	32.9	30.7	30.0
		number		
Average number of months of full-time school attendance by economic principal applicants in the first full year after landing	0.60	0.61	1.57	2.21
Total number of economic principal applicants	478,510	25,540	40,670	48,600

Source: Statistics Canada, 2019 Longitudinal Immigration Database.

Immigrants with Canadian study experience earned more than other immigrants in the initial years after immigration mostly because of their Canadian work experience

Table 2 presents results from ordinary least squares regression models for log annual earnings in the first two years after immigration among economic principal applicants who were admitted between 2000 and 2016 and who reported at least \$500 (in 2018 dollars) in annual earnings. Model 1 compares the observed log earnings in the first two years after immigration between immigrants with various years of study in Canada and those without Canadian study experience. Model 2 adds controls for gender, as well as three key variables used as criteria in the selection of economic immigrants: age, education level

at landing and official language. The results from this model are expected to indicate the extent to which these key human capital factors account for the observed earnings differences between immigrants with and without Canadian study experience. Model 3 further controls for levels of pre-immigration Canadian earnings. A previous study showed that the main reason that former international students earned more than immigrants admitted directly from abroad was pre-immigration Canadian earnings (Hou & Lu, 2017). Model 4 includes months of full-time postsecondary school attendance in a tax year after immigration. This additional control takes into account possible differences between immigrants with and without Canadian study experience in the tendency to pursue further study after immigration. Attending school full time for a few months in a year would reduce total work time and thus lower annual earnings.

When differences in background characteristics were not considered, immigrants with Canadian study experience earned more than those without (Model 1). For instance, immigrants with two to less than three years of Canadian study earned 0.242 log points (or about 27%) more than those without Canadian study experience one to two years after landing. However, the effect of years of Canadian study was not linear: those with three or more years of study earned much less than those with fewer years of Canadian study. Furthermore, the R-squared of Model 1 was very small, suggesting that Canadian study experience explained little of the variation in initial earnings among immigrants.

With similar characteristics in terms of age at landing, education level and official language knowledge, the earnings advantages of economic immigrants with less than three years of Canadian study experience over those without such experience were reduced by almost half, while the advantages of those with at least three years of Canadian study experience mostly disappeared (Model 2). Detailed decomposition analysis shows that the reduced earnings advantages of immigrants with Canadian study experience in Model 2 relative to the observed ones were mostly attributable to group differences in the share of those not speaking an official language and, to a lesser extent, the share of those in the 25-to-29 age group. In other words, a large part of the earnings advantages associated with Canadian study experience originated from better official language skills.

Furthermore, when group differences in pre-immigration Canadian earnings were controlled for, immigrants with Canadian study experience had significantly lower annual earnings than immigrants without such experience, particularly those with at least three years of Canadian study who earned 12% to 15% less (or -0.131 to -0.162 log points, Model 3). This result is consistent with the finding of the technical report for the design of the CRS (Bonikowska et al., 2015). A higher level of pre-immigration Canadian earnings was a stronger predictor of initial earnings after immigration, as indicated by a large increase in the model R-squared from Model 2 to Model 3 and the large gaps in initial earnings between immigrants with high levels of pre-immigration earnings (higher than national median earnings) and immigrants without Canadian work experience. As shown in Table 1, the majority (from 82% to 91%, depending on the number of years of study) of immigrants with Canadian study experience had pre-immigration earnings, while only about one-quarter of immigrants without Canadian study experience had such earnings. This sizable difference in pre-immigration Canadian earnings accounted for a large part of the observed earnings advantage associated with Canadian study experience.

Table 2
Ordinary least squares regression models predicting log annual earnings 1 to 2 years after immigration among economic principal applicants aged 20 to 44 at landing and admitted between 2000 and 2016

	Model 1	Model 2	Model 3	Model 4
	coefficient			
Intercept	10.215 ***	10.775 ***	10.235 ***	10.255 ***
Years of Canadian study (reference: no Canadian study)				
More than 0 to less than 1	0.216 ***	0.127 ***	-0.021 *	-0.025 **
1 to less than 2	0.289 ***	0.153 ***	-0.036 ***	-0.025 ***
2 to less than 3	0.242 ***	0.136 ***	-0.050 ***	-0.004
3 to less than 4	0.085 ***	0.020 ***	-0.131 ***	-0.026 ***
4 to less than 5	0.082 ***	-0.013 *	-0.162 ***	-0.018 ***
5 or more	0.125 ***	0.026 ***	-0.150 ***	-0.039 ***
Men (reference: women)	...	0.345 ***	0.283 ***	0.283 ***
Age at landing (reference: age 40 to 44)				
20 to 24	...	-0.007	0.088 ***	0.121 ***
25 to 29	...	0.076 ***	0.104 ***	0.125 ***
30 to 34	...	0.047 ***	0.065 ***	0.088 ***
35 to 39	...	0.017 ***	0.027 ***	0.040 ***
Education (reference: bachelor's degree)				
Secondary or less	...	-0.010 **	-0.081 ***	-0.088 ***
Trade certificate	...	-0.022 ***	-0.079 ***	-0.092 ***
Non-university postsecondary diploma	...	-0.092 ***	-0.100 ***	-0.109 ***
Master's degree	...	-0.032 ***	-0.011 ***	0.024 ***
Doctorate	...	0.315 ***	0.076 ***	0.086 ***
Language (reference: English mother tongue)				
Not speaking English or French	...	-0.933 ***	-0.575 ***	-0.539 ***
Other mother tongue, English and French	...	-0.886 ***	-0.486 ***	-0.410 ***
Other mother tongue, French	...	-1.203 ***	-0.762 ***	-0.642 ***
Other mother tongue, English	...	-0.514 ***	-0.239 ***	-0.236 ***
French mother tongue	...	-0.516 ***	-0.244 ***	-0.212 ***
Pre-immigration Canadian earnings (reference: no)				
More than 0 to 50% of national median earnings	...	...	0.053 ***	0.139 ***
More than 50% of national median to national median	...	...	0.303 ***	0.279 ***
More than national median to twice national median	...	...	0.752 ***	0.692 ***
More than twice national median	...	...	1.401 ***	1.347 ***
Months of full-time school attendance	...	...	...	-0.100 ***

... not applicable

* significantly different from reference category (p < 0.05)

** significantly different from reference category (p < 0.01)

*** significantly different from reference category (p < 0.001)

Notes: Models 2 to 4 also control for landing year fixed effects. Model R-squared is 0.005, 0.117, 0.223 and 0.278 from Model 1 to Model 4, respectively.

Source: Statistics Canada, 2019 Longitudinal Immigration Database.

The results from Model 1 to Model 3 in Table 2 suggest that the observed initial earnings advantage associated with Canadian study originated mostly from improved official language ability and acquired Canadian work experience. If they were similar in these pre-immigration characteristics, however, immigrants with Canadian study experience had lower initial earnings than those without. The main reason for their lower earnings was that immigrants with Canadian study experience before landing were more likely to pursue further studies in the initial years after immigration. As shown in Model 4, when months of postsecondary school attendance in a year were controlled for, the large negative earnings gaps of immigrants with at least three years of Canadian study experience became small.

In other words, the nonlinear effect of years of Canadian study (e.g., those with three or more years of study tend to earn much less than those with fewer years of Canadian study one to two years after immigration) was in large part a reflection of this group having been more likely to have spent time on (continuing) education during their early years as immigrants. Consequently, lower annual earnings in their first few years after immigration reflected their continued status as students. In contrast, those with fewer years of pre-immigration Canadian study (e.g., less than three years) may have been more likely to have completed their education in Canada before immigration and were available to spend relatively more time working, resulting in relatively higher annual earnings in the short term.

The benefits of Canadian study experience are more evident in the longer term

Earlier studies showed that more highly educated immigrants had faster earnings growth even though the educational level made little difference in initial earnings among immigrants who have arrived since the 2000s (Picot et al., 2016). Immigrants would possibly benefit more from Canadian study in the longer term because formal education in Canadian educational institutions would provide immigrants with high-quality occupational skills tailored towards the Canadian labour market and good knowledge of Canadian society and economy. Furthermore, the predominant role of pre-immigration Canadian work experience in affecting post-immigration earnings would fade over time, as would the likelihood of full-time school attendance.⁷

The analyses in tables 3 and 4 confirm that the benefits of pre-immigration study in Canada increased in the longer term. Table 3 presents regression model results for earnings in the five to six years (medium term) after landing of immigrants who were admitted between 2000 and 2013, and Table 4 for earnings in the 10 to 11 years (long term) after landing of immigrants who were admitted between 2000 and 2008. In both the medium- and long-term analyses, from Model 1 to Model 2, group differences in education level, age at landing and official language knowledge accounted for one-quarter to one-third of the observed earnings advantages associated with study in Canada, depending on years of study.⁸ In comparison, these factors accounted for 40% of the observed advantages in initial earnings associated with study in Canada (as in Table 2). Most importantly, after pre-immigration Canadian earnings were controlled for (from Model 2 to Model 3), compared with immigrants without study experience in Canada before landing, immigrants with at least one year of Canadian study experience no longer had lower earnings 5 to 6 years after immigration, and had higher earnings in 10 to 11 years. Further controlling for months of full-time school attendance had little impact on the earnings differences between immigrants without and with various years of Canadian study (Table 4). In the 10 to 11 years after immigration, those

7. For example, five to six years after immigration, the average months of full-time school attendance were 0.43 for immigrants with pre-immigration Canadian study experience and 0.58 for those with at least four years of Canadian study. The corresponding numbers were 0.16 and 0.22 months at 10 to 11 years after immigration.

8. For instance, in Table 3, the coefficient for two to less than three years of Canadian study decreased from 0.162 in Model 1 to 0.122 in Model 2, a 24% decrease after controlling for the covariates in Model 2.

with 2 to 5 years of pre-immigration Canadian study earned 9% to 12% (or 0.085 to 0.116 log points) more than immigrants without such experience (Table 4, Model 4).

Table 3
Ordinary least squares regression models predicting log annual earnings 5 to 6 years after immigration among economic principal applicants aged 20 to 44 at landing and admitted between 2000 and 2013

	Model 1	Model 2	Model 3	Model 4
	coefficient			
Intercept	10.553 ***	10.765 ***	10.493 ***	10.523 ***
Years of Canadian study (reference: no Canadian study)				
More than 0 to less than 1	0.097 ***	0.062 ***	-0.013	-0.012
1 to less than 2	0.160 ***	0.106 ***	0.006	0.011
2 to less than 3	0.161 ***	0.122 ***	0.032 ***	0.059 ***
3 to less than 4	0.110 ***	0.070 ***	0.001	0.025 ***
4 to less than 5	0.181 ***	0.110 ***	0.039 ***	0.055 ***
5 or more	0.143 ***	0.073 ***	-0.017 **	0.000
Men (reference: women)	...	0.326 ***	0.299 ***	0.293 ***
Age at landing (reference: age 40 to 44)				
20 to 24	...	0.089 ***	0.130 ***	0.161 ***
25 to 29	...	0.144 ***	0.155 ***	0.173 ***
30 to 34	...	0.115 ***	0.122 ***	0.136 ***
35 to 39	...	0.076 ***	0.078 ***	0.085 ***
Education (reference: bachelor's degree)				
Secondary or less	...	-0.181 ***	-0.194 ***	-0.197 ***
Trade certificate	...	-0.162 ***	-0.189 ***	-0.197 ***
Non-university postsecondary diploma	...	-0.162 ***	-0.165 ***	-0.168 ***
Master's degree	...	-0.005	0.004	0.015 ***
Doctorate	...	0.251 ***	0.100 ***	0.110 ***
Language (reference: English mother tongue)				
Not speaking English or French	...	-0.634 ***	-0.437 ***	-0.423 ***
Other mother tongue, English and French	...	-0.598 ***	-0.380 ***	-0.354 ***
Other mother tongue, French	...	-0.803 ***	-0.574 ***	-0.529 ***
Other mother tongue, English	...	-0.403 ***	-0.248 ***	-0.247 ***
French mother tongue	...	-0.410 ***	-0.242 ***	-0.225 ***
Pre-immigration Canadian earnings (reference: no)				
More than 0 to 50% of national median earnings	...	...	0.041 ***	0.043 ***
More than 50% of national median to national median	...	...	0.107 ***	0.089 ***
More than national median to twice national median	...	...	0.420 ***	0.396 ***
More than twice national median	...	...	1.008 ***	0.982 ***
Months of full-time school attendance	...	...	...	-0.093 ***

... not applicable

** significantly different from reference category (p < 0.01)

*** significantly different from reference category (p < 0.001)

Notes: Models 2 to 4 also control for landing year fixed effects. Model R-squared is 0.003, 0.067, 0.111 and 0.144 from Model 1 to Model 4, respectively.

Source: Statistics Canada, 2019 Longitudinal Immigration Database.

Table 4
Ordinary least squares regression models predicting log annual earnings 10 to 11 years after immigration among economic principal applicants aged 20 to 44 at landing and admitted between 2000 and 2008

	Model 1	Model 2	Model 3	Model 4
	coefficient			
Intercept	10.758 ***	10.893 ***	10.727 ***	10.739 ***
Years of Canadian study (reference: no Canadian study)				
More than 0 to less than 1	-0.005	-0.021	-0.065 ***	-0.063 ***
1 to less than 2	0.153 ***	0.094 ***	0.039 **	0.038 **
2 to less than 3	0.219 ***	0.151 ***	0.111 ***	0.116 ***
3 to less than 4	0.184 ***	0.108 ***	0.079 ***	0.085 ***
4 to less than 5	0.241 ***	0.146 ***	0.115 ***	0.116 ***
5 or more	0.183 ***	0.095 ***	0.051 ***	0.054 ***
Men (reference: women)	...	0.248 ***	0.235 ***	0.232 ***
Age at landing (reference: age 40 to 44)				
20 to 24	...	0.208 ***	0.225 ***	0.239 ***
25 to 29	...	0.259 ***	0.266 ***	0.273 ***
30 to 34	...	0.204 ***	0.207 ***	0.213 ***
35 to 39	...	0.113 ***	0.114 ***	0.117 ***
Education (reference: bachelor's degree)				
Secondary or less	...	-0.278 ***	-0.277 ***	-0.278 ***
Trade certificate	...	-0.272 ***	-0.275 ***	-0.278 ***
Non-university postsecondary diploma	...	-0.186 ***	-0.187 ***	-0.187 ***
Master's degree	...	0.024 ***	0.019 ***	0.022 ***
Doctorate	...	0.307 ***	0.174 ***	0.176 ***
Language (reference: English mother tongue)				
Not speaking English or French	...	-0.511 ***	-0.371 ***	-0.372 ***
Other mother tongue, English and French	...	-0.465 ***	-0.325 ***	-0.318 ***
Other mother tongue, French	...	-0.614 ***	-0.469 ***	-0.454 ***
Other mother tongue, English	...	-0.395 ***	-0.277 ***	-0.278 ***
French mother tongue	...	-0.366 ***	-0.253 ***	-0.247 ***
Pre-immigration Canadian earnings (reference: no)				
More than 0 to 50% of national median earnings	...	...	0.023 **	0.023 **
More than 50% of national median to national median	...	...	0.067 ***	0.063 ***
More than national median to twice national median	...	...	0.304 ***	0.300 ***
More than twice national median	...	...	0.807 ***	0.800 ***
Months of full-time school attendance	...	...	...	-0.083 ***

... not applicable

** significantly different from reference category (p < 0.01)

*** significantly different from reference category (p < 0.001)

Notes: Models 2 to 4 also control for landing year fixed effects. Model R-squared is 0.004, 0.053, 0.073 and 0.084 from Model 1 to Model 4, respectively.

Source: Statistics Canada, 2019 Longitudinal Immigration Database.

Conclusion

This article examined the relationship between years of Canadian study before immigration and subsequent earnings outcomes among economic principal applicant immigrants, both in the short and long term. Findings confirmed a shift towards rising shares of economic immigrants with Canadian education. This trend occurred alongside increasing numbers of international students (Crossman et al., 2021) and the implementation of immigration programs designed to admit economic principal applicants with Canadian study experience (e.g., various provincial programs and the CEC). Over the 2000-to-2019 period, the share of new economic principal applicant immigrants with Canadian study experience increased from 6% to 38%. Immigrants with Canadian study experience were younger, more educated, more likely to speak an official language and much more likely to have pre-immigration earnings in Canada than immigrants who did not study in Canada.

In the first two years of immigration, economic principal applicants with Canadian study experience earned considerably more than those who did not study in Canada. This advantage was due entirely to their better official language ability and much higher shares with Canadian work experience. With similar language profiles and pre-immigration Canadian work experience, those with Canadian study experience earned significantly less than those without, mostly because of the higher tendency to pursue further schooling in the initial years after immigration among those with Canadian study experience.

The benefit of Canadian study experience grew in the longer term. As economic immigrants worked more years in the Canadian labour market, pre-landing characteristics including official language ability, educational level and Canadian work experience became less important in accounting for the earnings advantages associated with Canadian study experience. Ten to 11 years after immigration, economic immigrants with at least one year of Canadian study experience had higher earnings than those without such experience regardless of whether they had pre-immigration Canadian work experience.

References

Bonikowska, A., Hou, F., & Picot, G. (2015). *Which human capital characteristics best predict the earnings of economic immigrants?* (Analytical Studies Branch Research Paper Series, No. 368). Statistics Canada.

<https://www150.statcan.gc.ca/n1/pub/11f0019m/11f0019m2015368-eng.htm>

Choi, Y., Crossman, E., & Hou, F. (2021). *International students as a source of labour supply: Transition to permanent residence*. *Economic and Social Reports* 1(6).

<https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021006/article/00002-eng.htm>

Crossman, E., Choi, Y., & Hou, F. (2021). *International students as a source of labour supply: The growth of international students and their changing socio-demographic characteristics*. *Economic and Social Reports* 1(7).

<https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021007/article/00005-eng.htm>

Government of Canada. (2017). *Express Entry: Early observations on November 2016 improvements*.

<https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/express-entry-early-observations-november-2016.html>

Government of Canada. (2021). *Government of Canada announces further measures to support international students*. Immigration, Refugees and Citizenship Canada news release.

<https://www.canada.ca/en/immigration-refugees-citizenship/news/2021/02/government-of-canada-announces-further-measures-to-support-international-students.html>

Hou, F., & Lu, Y. (2017). International students, immigration and earnings growth: The effect of a pre-immigration host-country university education. *IZA Journal of Development and Migration*, 7(5), 1–24.

Immigration, Refugees and Citizenship Canada. (2020). *Evaluation of Express Entry: Early impacts on economic outcomes and system management*.

<https://www.canada.ca/content/dam/ircc/documents/pdf/english/corporate/reports-statistics/evaluations/e3-2019-expressentry-accessible-eng.pdf>

Picot, G., Hou, F., & Qiu, T. (2016). The human capital model of selection and long-run economic outcomes of immigrants in Canada. *International Migration*, 54(3), 73–88.