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Post-migration education of immigrants admitted in 2010 and 2011: The impact of completing skilled trades training in Canada on economic outcomes

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Introduction

Recent immigrants in Canada can face challenges related to labour integration and a lack of recognition for their skills and experiences.¹ Previous studies have shown that Canadian postsecondary education could improve immigrants' labour market outcomes because this may lead to recognition of previously acquired skills and credentials.²

Despite the importance of post-migration education, previous studies did not capture information about apprenticeship training or differentiate it from other types of postsecondary education. This article studies immigrants who obtained their certificates in the skilled trades after migration and compares their labour market outcomes with those of immigrants who took a different postsecondary educational pathway in Canada.³ This can allow for a better understanding of the labour market integration of immigrants and the impact that Canadian education and training can have on their economic outcomes.

Few immigrants look to certify in the skilled trades

This study examines 77,425 principal applicants of the economic immigration streams who became permanent residents in 2010 and 2011.⁴ Seven years after admission, 16.7% had completed post-secondary education in Canada (Table 1), while just 1.4% (1,180) had received a certificate of qualification in the skilled trades (i.e., became journeypersons). Similar to the general journeypersons population, where 12.1% of certificates were awarded to women in 2019 (Statistics Canada 2022), the vast majority of immigrants who received a certificate were men (91.9%).⁵

Table 1
Characteristics of Economic Immigrant Principal Applicants without prior temporary permits who were admitted in 2010 and 2011

Canadian post-secondary education within seven years after admission	Immigrants		Women	Median age at admission
	number	percent ¹	percent	years
All admitted immigrants	77,425	100.0	38.0	35
No Post-Secondary Education	64,480	83.3	37.4	36
Other Post-Secondary Education	11,765	15.2	44.3	33
Skilled Trades Training	1,180	1.5	8.9	34

1. Percentage among all admitted immigrants without prior temporary permits

Source: Statistics Canada, Longitudinal Immigration Database, Education and Labour Market Longitudinal Platform, 2018

With a median age of 34, immigrants who became journeypersons were slightly older at admission than those who engaged in other postsecondary education (median age of 33), but younger than immigrants without Canadian postsecondary education (median age of 36). However, immigrants who became journeypersons were notably older than the population of apprentices in general. The median age at certification was 30 years for all apprentices who certified in 2010 and 2011 (Statistics Canada 2023a).

1. Warman, Sweetman and Goldmann (2015); Aydede and Dar (2017); Hou, Lu and Schimmele (2021).

2. Girard (2010); Banerjee and Verma (2012); Adamuti-Trache, Anisef, Sweet and Walters (2013); Ci, Laing, Voia and Worswick (2020); Marshall and Fecteau (2023).

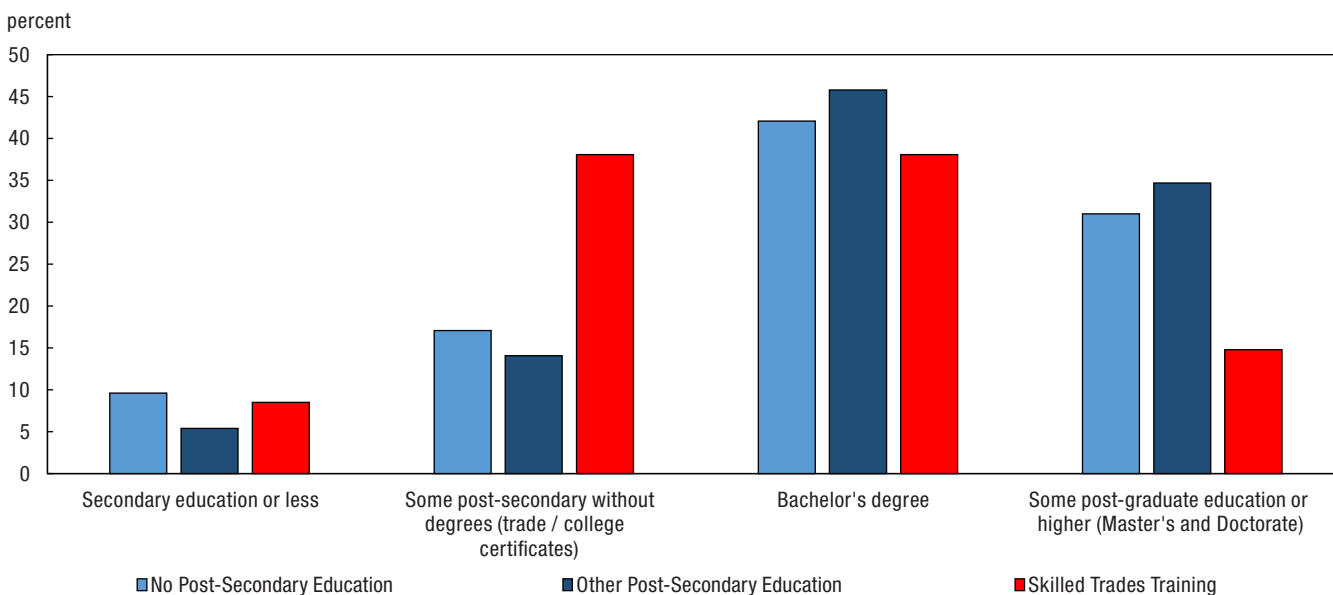
3. Although apprenticeship training is a part of postsecondary education in Canada, "postsecondary education" refers to educational programs offered in colleges and universities in this paper.

4. See the "Data and measures" section for more information on the data and sample restrictions.

5. A small number of immigrants included in this study had graduated from other post-secondary education and received a certificate of qualification in the skilled trades. These individuals are classified under the "Skilled Trades Training" category for this research.

Most immigrants in the sample had some postsecondary education before coming to Canada (90.4%). However, immigrants' educational attainment levels varied between those who became journeypersons and other immigrants. Compared with others, immigrants who became journeypersons were more likely to have trade or college certificates (38.1%) upon entering Canada as their highest level of education, and less likely to have bachelor's degrees or postgraduate degrees (Chart 1).

Chart 1
Level of education at admission by educational pathway after admission for economic immigrant principal applicants who were admitted in 2010 and 2011



Note: Education levels are based on self-reported values and are not guaranteed to be equivalent to Canadian credentials.
Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

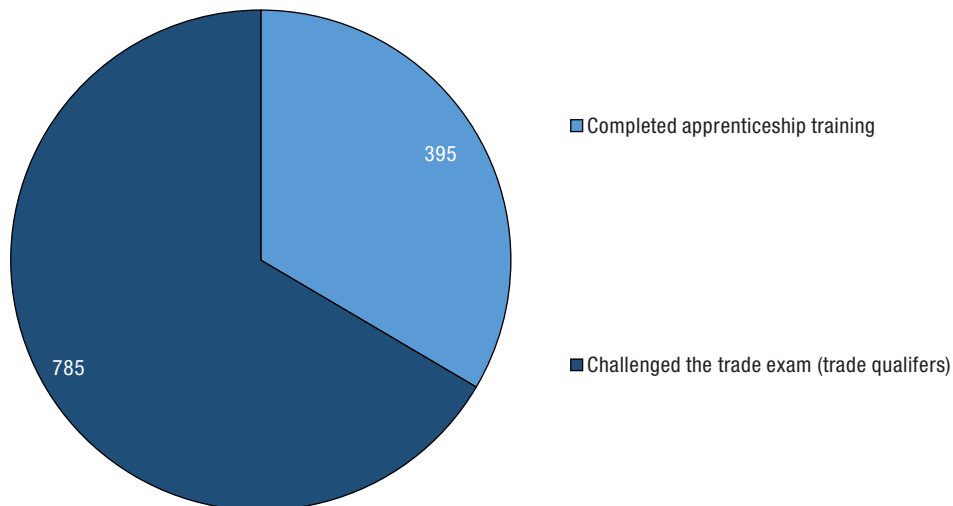
Among those who became journeypersons, the majority certified through a trade qualification route

There are two pathways to becoming a journeyperson in the skilled trades in Canada. The first pathway is the completion of formal vocational training through apprenticeship programs. The second pathway is by challenging the qualification exam without completing formal training (i.e., trade qualifiers). Each year, about one-quarter of newly certified journeypersons in Canada are trade qualifiers.

By contrast, among immigrants who earned a certificate within seven years of admission to Canada, most (785, or 66.5%) were trade qualifiers (Chart 2). Of those immigrants who became journeypersons, about one-third (380) had done so within the first two years, and close to half (560) within three years (Chart 3).⁶ This suggests that many of them may have previous work experience in the field or received training (and certification) in their home country prior to immigrating to Canada as skilled tradespeople.

6. Most immigrant journeypersons (85.0%) received a single certificate. For those who received multiple certificates, the year of the earliest certification is used in Chart 3.

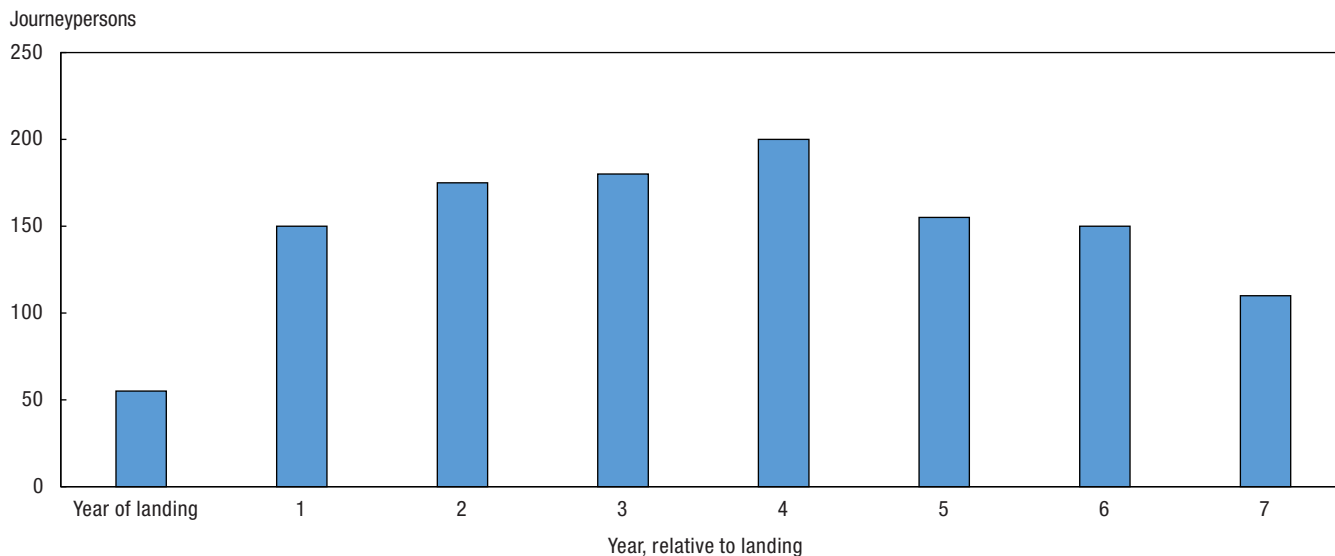
Chart 2
Mode of certification for immigrant journeypersons, for the first certificate



Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

By comparison, Canadian apprentices generally took significantly longer to certify after accounting for program duration, which is an average of four years at the Canada-level. Less than one-fifth of apprentices in Canada complete their training within the program duration (Jin, Langevin, Lebel and Haan 2020).

Chart 3
Timing of the first certificate, relative to the year of landing



Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

The electrician trades were the most popular trades for immigrants admitted to Canada in 2010 and 2011. Of those who went on to certify in the skilled trades, 31.7% certified as either construction or industrial electricians, followed by 6.4% who certified in the industrial mechanic (millwright) trade (Table 2). Because these three trades have higher employment incomes, compared with other trades, their popularity may be partly related to the earnings potential.⁷

Table 2
Trade of certification, for the first certificate of qualification

Trade name	Journeypersons	
	number	percent
Construction Electrician	203	20.3
Industrial Electrician	114	11.4
Industrial Mechanic (Millwright)	64	6.4
Power Engineer/Stationary Engineer (4th Class)	59	5.9
Cook	51	5.1
Halocarbons/Refrigerant Tester (Vehicles)	38	3.8
Automotive Service Technician	30	3.0
Hairstylist	30	3.0
Esthetician (Nail Technician)	21	2.1
Information Technology Support Associate (Customer Care Agent)	21	2.1
Refrigeration and Air Conditioning Mechanic	21	2.1
Welder	21	2.1
Plumber	17	1.7
Other	310	31.0

Source: Statistics Canada, Longitudinal Immigration Database, Education and Labour Market Longitudinal Platform, 2018

Many immigrant journeypersons intended to work in the skilled trades

Two in five immigrant journeypersons intended to work in the skilled trades in Canada before admission. The **intended occupation**⁸ question, as asked on the permanent residence application for admission to Canada, highlights that much of the immigrant journeyperson population was admitted to Canada to work in the skilled trades (Table 3).

About one-fifth of immigrant journeypersons certified in their intended occupation. Furthermore, 39.4% of those who eventually certified did so in a trade with the same broad occupational classification as their intended occupation.

Table 3
Journeypersons whose first certification was in their intended occupation

	Journeypersons	
	number	percent
Same unit group (4-digit NOC)	210	18.6
Same minor group (first 3-digit NOC)	315	27.9
Same major group (first 2-digit NOC)	375	33.2
Same broad occupation classification (first digit NOC)	445	39.4

Note: Not all journeypersons had valid intended occupation information in the permanent residence application. This table includes only those who do.

Source: Statistics Canada, Longitudinal Immigration Database, Education and Labour Market Longitudinal Platform, 2018

Considering a large proportion of immigrant journeypersons had trades or college certificates as their highest level of education prior to entering Canada and had obtained their Canadian trades certificates at a faster pace and at an older age than Canadian apprentices, this suggests that many immigrant journeypersons had significant work experience or had received training (or certification) in the skilled trades before coming to Canada.⁹

7. The median employment income of all journeypersons who certified in 2017 was \$62,620 (2018 constant dollars) in 2019, two years after certification. By comparison, for the same cohort, the median incomes of construction electricians, industrial electricians and industrial mechanics were \$72,760, \$83,740 and \$92,650, respectively (Statistics Canada 2023a).

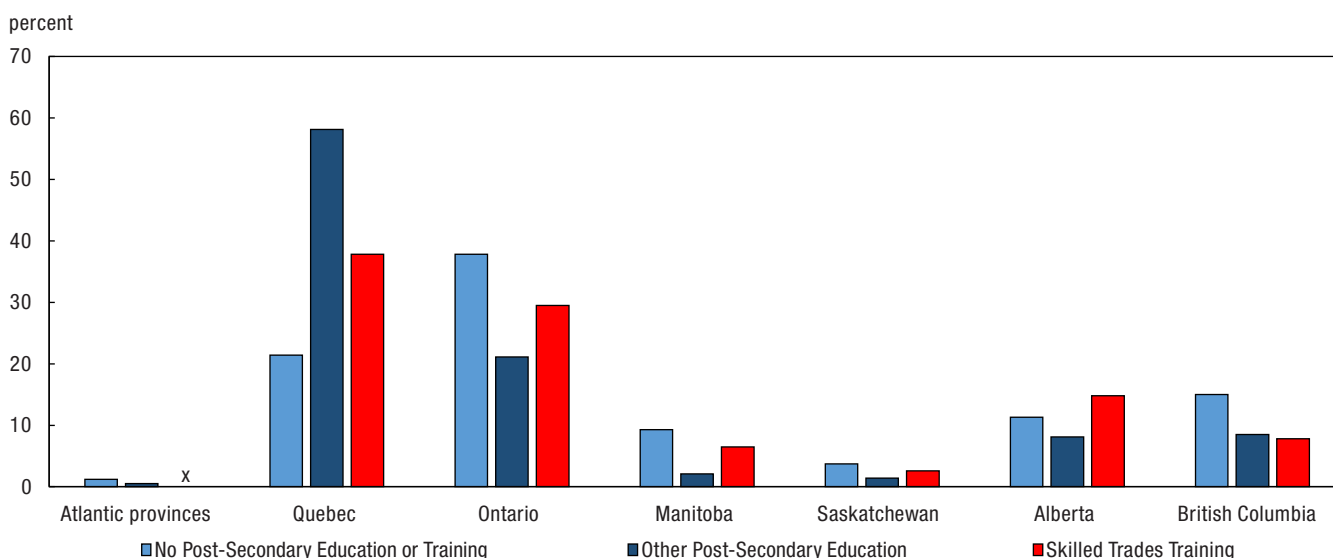
8. These data were collected through the National Occupational Classification (NOC) codes listed on immigrants' applications. NOC codes are four digits that provide a standardized language and organization for occupational information, define occupations starting with a broad category for the first digit of the NOC, and become more precise for a specific occupation with each subsequent digit of the code (Government of Canada 2019).

9. The sample is restricted to those who had no work or education experience in Canada prior to their admission. Therefore, it is less likely that they challenged the qualification exam solely based on their post-admission experience in trades in Canada.

Immigrants who certified as journeypersons were more likely to live in Quebec and Alberta

Four in five immigrants who became journeypersons seven years after admission lived in either Quebec, Ontario or Alberta (Chart 4). In Alberta, immigrant journeypersons outnumbered all other immigrants. About 14.8% of immigrant journeypersons resided in the province, compared with 8.1% of immigrants with other postsecondary education and 11.3% without Canadian postsecondary education. This may be partly related to the province's large oil and gas industries, which provide employment opportunities for many tradespeople.

Chart 4
Region of residence seven years after admission, principal applicants of economic programs without prior temporary permits who were admitted in 2010 and 2011



x suppressed to meet the confidentiality requirements of the *Statistics Act*

Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

Seven years after admission to Canada, most economic immigrant principal applicants lived in their destination province, as stated on the permanent residence application (Table 4). Although immigrants who had completed other postsecondary education were the most likely to live in the destination province (84.4%), there were no big differences across immigrants with different educational pathways in Canada.

Table 4
Region of Residence, 7 years after admission, principal applicants of an economic immigration program without prior temporary permits, 2010 and 2011

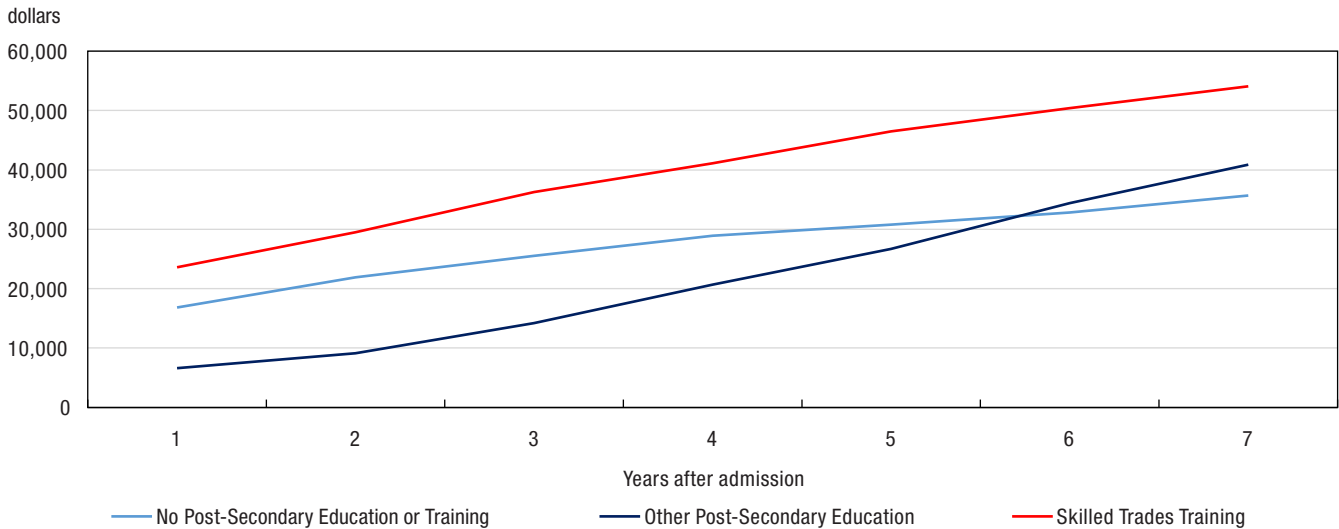
	Canadian Post-secondary Education experience within seven years of admission		
	No Post-Secondary Education or Training	Other Post-Secondary Education	Skilled Trades Training
Immigrants	64,480	11,765	1,180
Living in the destination province 7 years after admission	79.1	84.4	81.6

Source: Statistics Canada, Longitudinal Immigration Database, Education and Labour Market Longitudinal Platform, 2018

Immigrant journeypersons were economically better off than other immigrants

Completing skilled trades training had substantial economic benefits, compared with the other educational pathways. Measuring the median employment incomes seven years after admission showed that certified journeypersons earned \$54,100, almost \$20,000 more than those who did not complete Canadian postsecondary education, and \$13,200 more than those who completed other postsecondary education (Chart 5).

Chart 5
Median employment income for economic principal applicants without prior temporary permits over seven years after admission



Note: Individuals who did not file taxes during the timeframes associated with the estimates were excluded from these income estimates. The percentage of those who filed taxes is an important data quality measure, highlighting the coverage and reliability of the statistics. The percentage of those who filed taxes ranged every year of study as follows: no postsecondary education in Canada (79.9% to 90.2%), other postsecondary education in Canada (88.0% to 94.9%) and skilled trades training in Canada (91.9% to 97.5%).
Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

While the apprentice and journeyperson population experienced strong income growth each year, those who completed other postsecondary education had delayed growth in total employment income because they were attending school.¹⁰

Differences between those who became journeypersons versus those who completed other postsecondary education may be related to the inherent work-based nature of many apprenticeship programs. Apprentices are paid during their on-the-job training and are actively accumulating experience in the labour market during this time. By contrast, those who partake in other postsecondary programs may be unable to work or have limited opportunities for paid employment while studying.

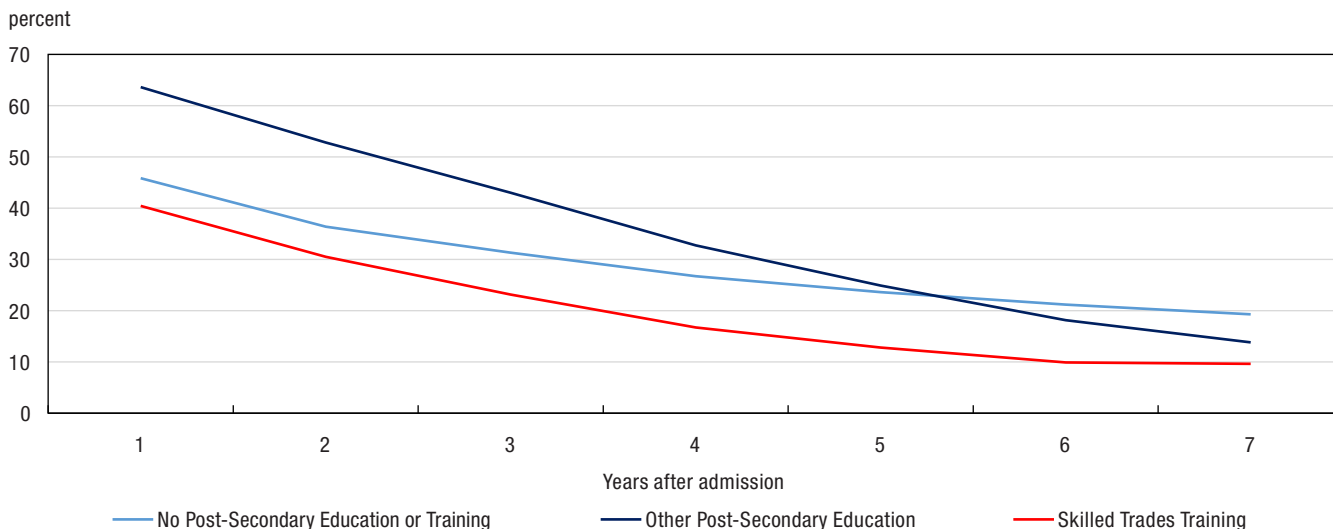
Similarly, immigrant journeypersons were economically better off than other immigrants after admission. One year after admission to Canada, all three groups of immigrants—those who became journeypersons, those who graduated from colleges and universities, and those who did not have Canadian postsecondary education—had high levels of low-income status (Chart 6).¹¹ However, by seven years after admission, the percentage of immigrants with low-income status who had some form of postsecondary education after admission had dropped to rates similar to the rest of Canada—between 10% and 13% (Statistics Canada 2023b).

Furthermore, by the seventh year, immigrants who had not completed postsecondary education in Canada had double the low-income status, at 19.3%, compared with certified journeypersons, at 9.6%. The percentage of immigrant journeypersons in low-income status was even lower than that of the Canadian population.

10. Similar results were also found by Marshall and Fecteau (2023).

11. The low-income measure is derived from the T1 Family File and may differ from other data sources, such as survey data. See Pinard and Pagé (2018) for more information.

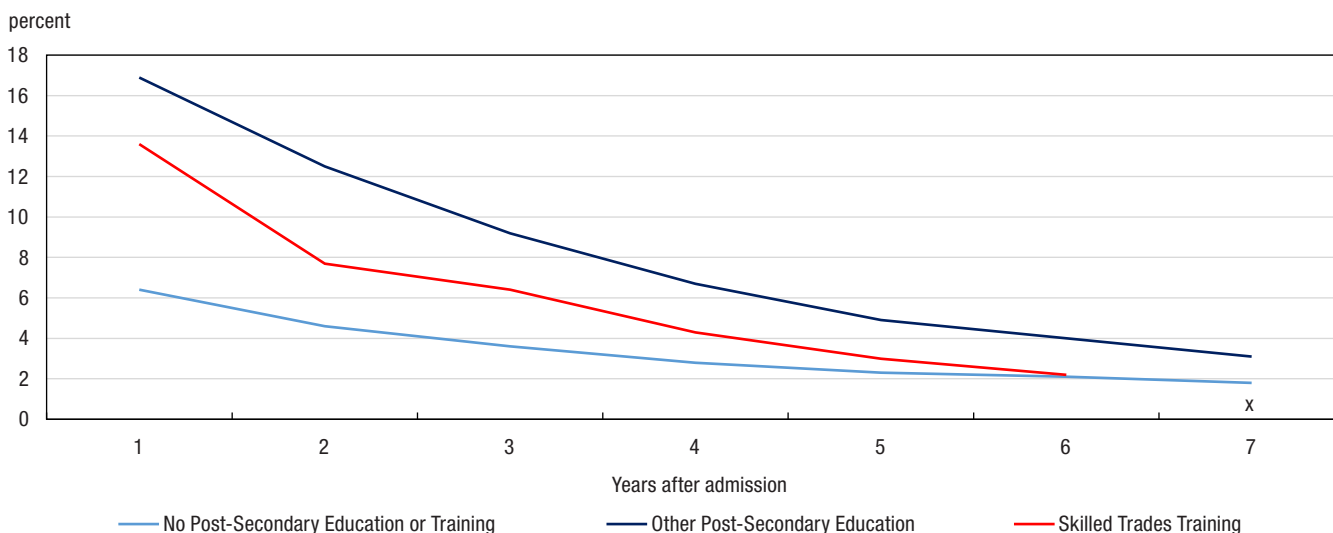
Chart 6
Low-income status for economic principal applicants without prior temporary permits over seven years after admission



Note: Individuals who did not file taxes during the timeframes associated with the estimates were excluded from these income estimates. The percentage of those who filed taxes is an important data quality measure, highlighting the coverage and reliability of the statistics. The percentage of those who filed taxes ranged every year of study as follows: no postsecondary education in Canada (79.9% to 90.2%), other postsecondary education in Canada (88.0% to 94.9%) and skilled trades training in Canada (91.9% to 97.5%).
Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

Similar patterns were observed for the percentage of immigrants receiving social assistance payments (Chart 7). The percentages declined over time for all immigrants, but particularly for immigrant journeypersons, with fewer receiving payments seven years after admission.¹²

Chart 7
Receipt of social assistance payments for economic principal applicants without prior temporary permits over seven years after admission



x suppressed to meet the confidentiality requirements of the *Statistics Act*

Note: Individuals who did not file taxes during the timeframes associated with the estimates were excluded from these income estimates. The percentage of those who filed taxes is an important data quality measure, highlighting the coverage and reliability of the statistics. The percentage of those who filed taxes ranged every year of study as follows: no postsecondary education in Canada (79.9% to 90.2%), other postsecondary education in Canada (88.0% to 94.9%) and skilled trades training in Canada (91.9% to 97.5%).
Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

12. Few immigrant journeypersons received payments within seven years after admission, and the percentage was too low to publish.

Summary

As Canada faces an aging skilled trades workforce, where nearly a quarter (23.1%) are aged 55 or older according to the Census of Population 2021, immigration will likely play a key role in addressing some of these labour shortages. This research used data from the Longitudinal Immigration Database and the Education and Labour Market Longitudinal Platform to address gaps in the literature by examining the pathways and labour market outcomes of completing post-migration postsecondary education and apprenticeship training.

This study found that 1.5% of principal applicants received a certificate of qualification in the skilled trades after seven years, while 15.2% completed other postsecondary education. Like the general population of journeypersons in the skilled trades, most of the immigrant journeypersons were men. Compared with other immigrants, they had lower levels of education at admission.

Most economic principal applicants who certified in the skilled trades received one certificate of qualification, certified within the first three years of admission and certified as trade qualifiers. Construction and industrial electricians were the most popular trades for these certified journeypersons, and more than 30% certified in these trades. Most immigrant journeypersons intended to come to Canada to work in the skilled trades. They were also most likely to have certified and lived in Quebec, Ontario or Alberta, with four-fifths living in their intended destination province.

Finally, this research found that skilled trades training had more robust economic returns for admitted immigrants than other postsecondary education or no postsecondary education. Seven years after admission in Canada, these certified journeypersons had the lowest rates of low-income status. They earned almost \$20,000 more than those who did not complete Canadian postsecondary education and \$13,200 more than those who completed other postsecondary education.

Limitations

While this research is valuable for illustrating the characteristics of immigrants who complete post-migration education and training, specifically through looking at the impact of different forms of education on labour market indicators, this work has some limitations.

The combined cohort size of the immigrant journeyperson population included in this research was relatively small, with 1,180 immigrants. Analysis with small counts was suppressed to ensure estimates of acceptable quality and data confidentiality. Consequently, this restricted the ability to disaggregate the data to study gender, region of birth, differences by trade of certification or earnings after seven years.

In addition, this research may not capture all immigrants who went on to work in the skilled trades. Provincial and territorial jurisdictions determine the trades for which apprenticeship training is available and for which trades certifications are mandatory. This study specifically focused on immigrants who completed skilled trades training after admission to Canada. This may not have captured those who worked in trades where certifications were voluntary.

Lastly, the data on the earnings of journeypersons seven years after admission to Canada are limited. They may not reflect full-time or full-year employment, or account for the number of hours worked. Furthermore, these earnings do not necessarily reflect employment in the skilled trades. For more information on tax data, see Statistics Canada (2015).

Future research should continue to focus on the outcomes of each educational pathway for immigrants who choose to participate in post-migration education. Furthermore, more research should be conducted to better understand the reasons and correlations associated with returning to postsecondary education and training. Finally, expanding upon this research to include a larger sample size would allow for greater disaggregation and more meaningful insights on the impacts of choosing specific trades on the earnings of immigrants—for example, regarding gender.

Note to readers

Data and measures

This research used Statistics Canada's Longitudinal Immigration Database (IMDB) linked with the Education and Labour Market Longitudinal Platform (ELMLP) to determine who certified in the skilled trades or graduated from other postsecondary education. Descriptive statistics were derived for all immigrants who were admitted in 2010 and 2011, and this pooled cohort was followed over seven years to determine their educational and labour market outcomes.

Specific attention was paid to those who were admitted as principal applicants in an economic immigration stream with no previous temporary permits. Economic principal applicants can be defined as immigrants who apply and are accepted as the primary applicants for permanent residency through economic immigration streams.¹³ As ELMLP records prior to 2009 are limited for determining postsecondary education in Canada, permanent residents with previous permits were removed—this was done to prevent misclassifying an individual who completed Canadian education before admission as a permanent resident of Canada as someone without Canadian postsecondary education. In addition, those who never filed taxes or never had residence in Canada within seven years after landing were further excluded. Imposing these restrictions resulted in the analytical sample of 77,425.

The earnings calculated were derived from the T1 Family File included in the IMDB linkage file. These include employment earnings, such as wages and salaries, commissions from employment, training allowances, tips and gratuities, tax-exempted Indian employment income, and net self-employment income. The earnings in this report are limited because they may not represent full-time or full-year income. The year of admission was excluded from the report of earnings because immigrants were admitted at variable times throughout the year of admission, impacting their earnings potential. Year 1 allowed for a more accurate comparison between all groups, free from the influence of the admission date.

All income data were adjusted for inflation and reported in 2018 constant Canadian dollars. Individuals who did not file taxes during the study timeframe were excluded from these income estimates.

Definitions

Immigrants included in this cohort were separated into three groups, based on their Canadian educational pathway: skilled trades training, other postsecondary education and no postsecondary education. Immigrants included in the skilled trades training pathway were those who certified in the skilled trades in Canada by seven years after admission. Those classified as having "other postsecondary education" had completed university, college or certificate programs in Canada within seven years after admission, while those with no postsecondary education included those who did not complete any form of postsecondary education or training in Canada.

Immigrants who certified in the skilled trades were further divided into those who completed apprenticeship training and trade qualifiers, depending upon their method of certification. Registered apprentices are people in a supervised work training program in a designated trade within their provincial or territorial jurisdiction. To complete the training, apprentices must be registered with the appropriate governing body, such as the Ministry of Education or Ministry of Labour, or a trade-specific industry governing body. Trade qualifiers are people who have worked in a specific trade for an extended period, without necessarily having ever been an apprentice, and who have received certification from a jurisdiction, usually through a skills assessment examination in the trade. After certification, both registered apprentices and trade qualifiers become journeypersons.

13. There are two broad permanent resident immigration categories through which applicants are selected based on their satisfaction of the program or class criteria: economic classes and non-economic classes. Economic immigration programs can include classes such as the federal skilled workers class, Quebec skilled workers class, the Canadian Experience Class, the federal skilled trades class and the Provincial Nominee Program, among many others. For more information, please consult Government of Canada (2022).

Appendix

Table A.1
Sociodemographic characteristics of all admitted immigrants, 2010 and 2011

Canadian Post-secondary Education experience within seven years of admission	Immigrants		Women	Was a temporary resident before admission	Immigration class ²			
	number	percent ¹			Economic immigrant, principal applicant	Economic immigrant program, family	Family Sponsored	Other class
All admitted immigrants	415,150	100.0	51.9	27.5	30.8	30.8	26.6	11.8
No Post-Secondary Education	363,020	87.4	52.0	26.8	29.6	30.2	28.0	12.3
Other Post-Secondary Education	48,000	11.6	54.3	31.8	38.1	36.7	16.4	8.8
Skilled Trades Training	4,130	1.0	16.3	34.1	47.1	22.0	22.3	8.6

1. Percentage among all immigrants admitted in 2010 and 2011

2. There are two broad permanent resident immigration categories through which applicants are selected on the basis of their satisfaction of program or class criteria, economic classes and non-economic classes. For more information, please consult this link. <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/operational-bulletins-manuals/permanent-residence.html>

Source: Statistics Canada, Longitudinal Immigration Database and Education and Labour Market Platform, 2018

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Statistics Canada. 2023b. [Table 11-10-0135-02 Percentage of persons in low income by sex](https://doi.org/10.25318/1110013501-eng) [Data table]. <https://doi.org/10.25318/1110013501-eng>

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