

Post-secondary pathways and outcomes of international students in Ontario

Audrey Appiah, Michael Dubois, Reuben Ford & Ashley Pullman

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Contents

Introduction

In 2023, the Higher Education Quality Council of Ontario (HEQCO) created the Consortium on International Education with the goal to commission evidence-based projects that could inform international education policies and practices in Ontario. The Social Research and Demonstration Corporation (SRDC) proposed to contribute to these efforts by investigating the systemwide pathways of international students. The aim was to identify trends over time in the make-up of international students, whether or not they attended publicly funded institutions, and their schooling, labour market, and migration outcomes.

The project relied on microdata from Statistics Canada's Education and Labour Market Longitudinal Platform, which links immigration data, postsecondary enrollment records from public institutions, and annual tax information. The combination of these datasets allowed SRDC to identify every person issued an Ontario study permit between 2010 and 2020, track their entry in the public postsecondary system and analyze their schooling, labour market, and migration outcomes using both descriptive and regression approaches.

This report summarizes the results from both phases of SRDC's research project, the first of which focused on Ontario study permit holders who attended publicly funded postsecondary institutions and the second of which investigated the pathways of those who were outside the public postsecondary system. While both phases of research resulted in comprehensive technical reports, made available on SRDC's website, this report aims to contrast summaries of the results from both phases and point to policy recommendations emerging from the findings.

Data and Methodology

DATA

Both phases of the project used linked ELMLP data from three main sources:

- The Longitudinal Immigration Database (IMDB) provides data on individuals issued non-permanent resident work or study permits since 1980, even those who did not become a permanent resident. Person- and permit-level data provide information on every work and study permit issued, as well as certain characteristics of the applicant.
- The Postsecondary Student Information System (PSIS) contains public college and university enrollment records from across Canada, with most institutions providing complete information from the 2009-10 academic year onward. At the time of undertaking the analysis, PSIS records from Ontario were available up to 2021-22 for most institutions, although there were some missing college records from 2009-10 to 2012-13. PSIS does not include enrollment information on students in Public College-Private Partnerships (PCPP). SRDC also used the Registered Apprenticeship Information System (RAIS) data to identify any international students in the public PSE system who went on to complete an apprenticeship as an alterative measure of graduation.
- The T1 Family File (T1FF) provides income, earnings, and social benefit information among tax filers in Canada. At the time of undertaking the analysis, T1FF data was available up to the 2021 tax year and could be separately linked to both PSIS and IMDB records.

POPULATION OF STUDY

Using IMDB's non-permanent resident data, we identified all individuals who were issued an Ontario study permit of two weeks or longer between 2010 and 2020, regardless of whether they received an earlier permit to study elsewhere in Canada.[1] We then excluded any records at the primary, secondary, or CEGEP[2] level to focus exclusively on postsecondary studies in Ontario. To allocate each person to a "study permit cohort," SRDC then retained the first Ontario study permit identified for each individual in the sample.

To generate the final dataset, the next stage of data cleaning removed a small number of duplicate records (i.e., people who had more than one study permit issued on the same day) by selecting to keep the study permit record that was valid for the longest period of time. From there, a small number of sample exclusions removed any person who: was aged 15 or younger when they were first issued an Ontario postsecondary study permit; could only be linked to PSIS records from regions outside of Ontario;[3] could only be linked to PSIS graduation records (but had no enrollment records), or; had permanent residency status prior to issuance of their study permit. The last exclusion was made because it was not possible to identify whether these people applied for restoration and were later reissued their permanent residency status (as only the original landing date was available in the IMDB data).

1 Along with removing any permit records that were issued for less than 14 days, we excluded a small number of permits that did not have a valid end date (either missing completely or a date that came before the date the permit was issued).

2 While CEGEP programs are primarily a feature of the Quebec education system, a small number of PSE institutions in Ontario offer equivalent programs (e.g., University or Ottawa, Western University). Permits issued for these types of programs were excluded from the analysis.

3 Approximately 3.8 per cent of the initial sample was issued Ontario permits, but only appeared in PSIS records from other Canadian regions. As part of initial cleaning, these individuals were removed from all subsequent analyses as they appeared to be studying outside Ontario.

METHODOLOGY

We present results from the following sets of analyses.

The compositional analysis investigated the distribution of study permit holders in Ontario, and considered who among them did and did not appear in public Ontario colleges and universities (i.e., in PSIS). Using PSIS-IMDB linkage keys, each person issued an Ontario study permit was linked from the IMDB to PSIS enrollment records from 2009-10 to 2021-22. This linkage generated a binary outcome variable: no entry to the public system (i.e., Ontario study permit holders without PSIS enrollment records) termed "*public non-attenders*" or entry to the public system termed "*public attenders*." We then explored the relationship between selected independent variables and attending/not attending public institutions.

For *public attenders*, the graduation analysis was able to measure whether the student was: 1) no longer enrolled and not observed to graduate; 2) still enrolled (not yet graduated); 3) observed as graduating from any Canadian postsecondary or apprenticeship program within four, five, six, and seven years after their initial entry to a public institution.[4]

The next stage of analyses for both *public attenders* and *public non-attenders* examined their labour market entry and earnings. One to five years following receipt of their study permits, we measured a series of dependent variables, including whether or not: the person filed a tax return; they declared education deductions; they declared any earnings; and their average annual earnings.[5] A similar approach was used to analyze *public attenders'* five-year post-graduation labour market outcomes: public non-attenders were not included as the absence of schooling information means their graduation outcomes are unknown.

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4 Select cohorts are included in each model depending on the availability of the PSIS data after entry to the public Ontario system. In the four-year outcome model, people who entered the public system between the 2009-10 and 2016-17 academic years were included, while in the seven-year outcome model, only those who entered between 2009-10 to 2013-14 were included.

5 Earnings were calculated using the sum of positive self-employment earnings, T4 earnings, and "other" earnings, which were then inflation-adjusted.

The final analysis examined the residency and migration outcomes of all study Ontario permit holders, *public attenders* and *non-attenders* alike. In this analysis, separate models examined yearly outcomes (from year one to eight) after first being issued a study permit. As Figure 1 illustrates, the calendar year in which each yearly outcome was measured differs depending on a person's Ontario study permit cohort. From year one to eight, a person could have one of three outcomes: 1) no active permit, 2) an active study and/or permit, and 3) transition to permanent residency.

Figure 1: Timing of migration outcomes across cohorts

Initial Ontario Permit Cohort	Tax Year											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2010		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8			
2011			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8		
2012				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	
2013					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
2014						Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
2015							Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
2016								Year 1	Year 2	Year 3	Year 4	Year 5
2017									Year 1	Year 2	Year 3	Year 4
2018										Year 1	Year 2	Year 3
2019											Year 1	Year 2

Figure 1: Timing of migration outcomes across cohorts

The source of information was similar across the two samples (i.e., *public attenders* and *non-attenders*), but they vary in some ways. Schooling information (e.g., field of study, institution, and credential type) for *public attenders* is updated in PSIS, but for *public non-attenders* we rely solely on the information available in the IMDB, which is not necessarily updated when changes occur and is often collected with fewer details.

Findings

COMPOSITIONAL ANALYSIS

From 2010 to 2019, there was a large increase in the number of individuals issued their first Ontario study permit. In 2010, approximately 48,600 individuals were first issued an Ontario study permit. The number grew to just under 114,000 people in 2019. In 2020, the number decreased substantially due to the COVID-19 pandemic (Figure 1).

Growth in the number of study permits issued varied by region/country of citizenship, with people from India comprising over 50 per cent of individuals first issued an Ontario study permit. Their numbers increased by almost 500 per cent between 2010 and 2019.

Other regions/countries saw more modest increases between 2010 and 2019 (e.g., China, Central America and Caribbean, South America, West Africa, South Asia), and there was a more sizable increase in the number of initial permits issued to people from Southeast Asia.

Comparing the first year available (i.e., 2010) with the last year available before COVID-19 (i.e., 2019), the gender distribution across study permit holders changed. While women

Figure 2: Number of individuals issued their first Ontario study permit by year

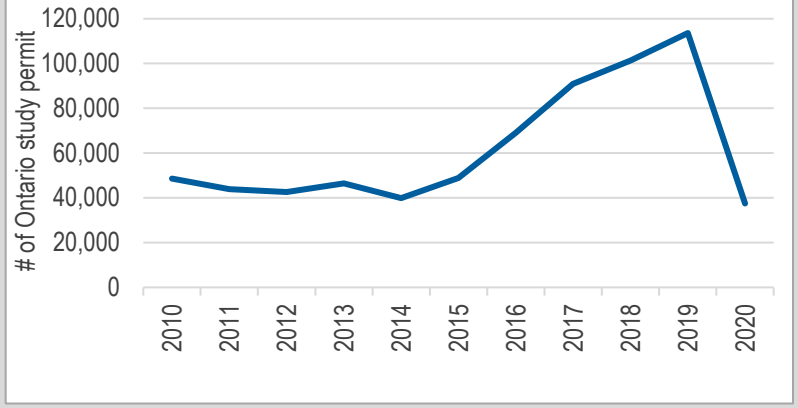
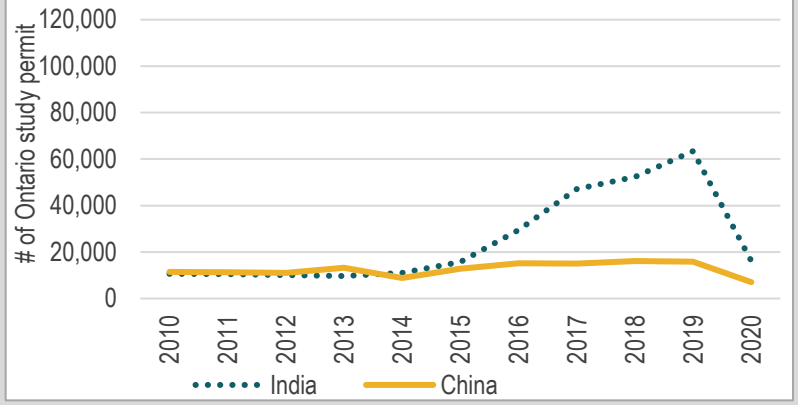


Figure 3: Number of Indian and Chinese students issued their first Ontario study permit by year



represented 41 per cent of the study permit holders in 2010, they represented almost half (47 per cent) by 2019.

Looking at application location, those who applied from their home region/country of citizenship always represented the majority, but those applying from within Canada increased significantly over the decade (from 0 to 11 per cent).

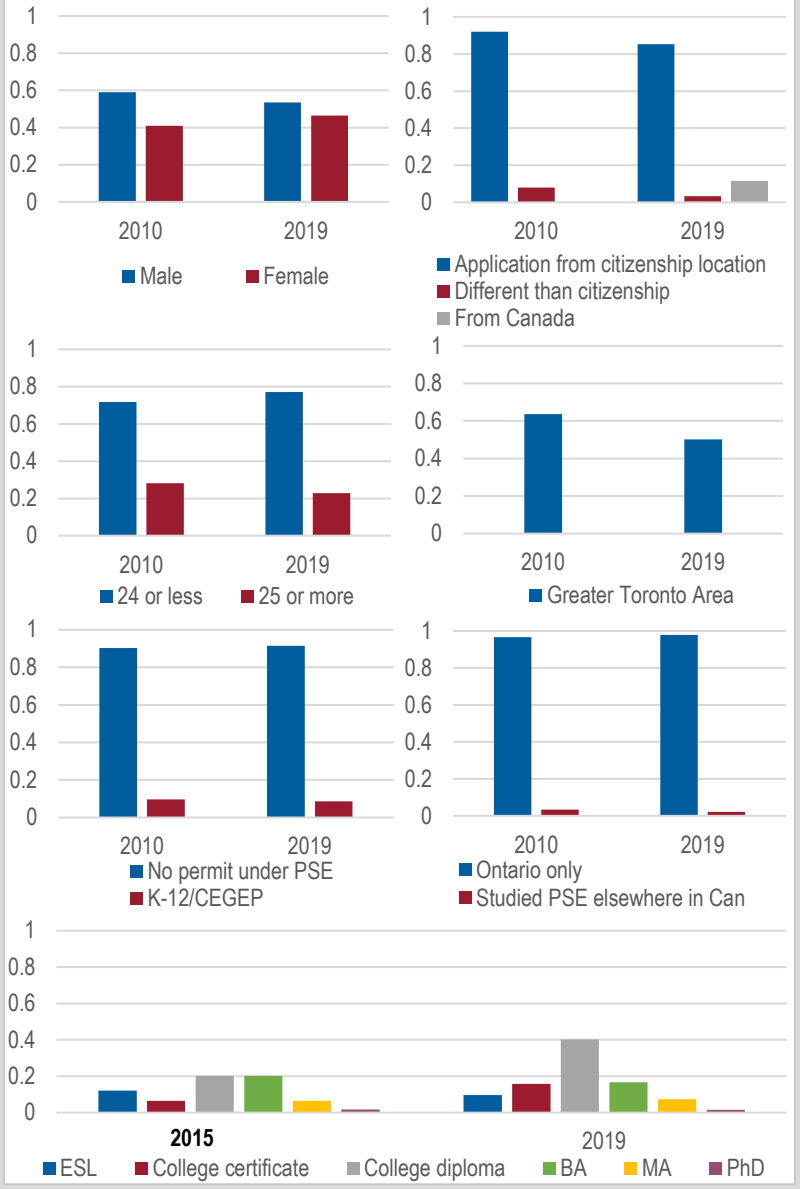
The share of younger study permit holders increased over time as 77 per cent were 24 years old or younger in 2019 yet only 72 per cent were in that age group in 2010.

The majority had a Greater Toronto Area institution as the destination on their study permit in 2010 (64 per cent). Although that was still true in 2019, the GTA share had reduced (50 per cent).

The proportion of applicants with prior Canadian education (whether K-12/CEGEP or PSE elsewhere in Canada) remained relatively stable over time.

Finally, the IMDB collected study-level information differently over time. The reference period for assessing changes in study-level distribution is thus different and compares the *2015 cohort* of study permit holders to the *2019 cohort*. Over that period, we observe a doubling of the share of permit holders at the college certificate (6 to 16 per cent) and diploma (20 to 40 per cent) levels.

Figure 4: Sample distribution across various characteristics of study permit holders



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Discussion

The compositional analysis revealed a large increase in the number of international students first issued Ontario study permits between 2015 and 2019—with a sharp decline in 2020 due to the COVID-19 pandemic.

Generally, the distribution of study permit holders across various demographic and study characteristics did not significantly change over time, with a few notable exceptions.

International students applying for a postsecondary level study permit from within Canada has increased significantly over time, reaching levels equivalent to the share of applicants with prior Canadian education experience (K-12 or PSE). This could be due to: changes in application patterns (e.g., individuals no longer return to their country of citizenship between prior education spells and their Ontario PSE application); the application process becoming more detailed (e.g., the forms capture more accurately current applicant location in combination with country of citizenship); or more individuals applying for study permits while holding another official status in Canada that is not captured here (e.g., Canadian work permit holders).

The share of study permit holders headed for Toronto decreased over time (-14 percentage points) with Kitchener/Stratford (+7 percentage points) and North Ontario (+5 percentage points) increasing in popularity. This could be due to niche programming offered in these locations and institutional growth, relatively lower cost of living, and/or favourability of smaller population centres for immigration programs such as PNP.

The most obvious difference in composition over time was study level: college certificates almost tripled (6 to 16 per cent) and college diplomas doubled (20 to 40 per cent) between 2015 and 2019. According to the Office of the Auditor General of Ontario (2021), this shift was motivated by an attempt to compensate for the decline in domestic student enrollment in colleges. Accordingly, the Office considered the shift to have created an overreliance on international student fees in these institutions' budgets. In turn, although not yet reflected in data available for this project, such overreliance meant recent changes in IRCC policies disproportionately impacted these institutions.

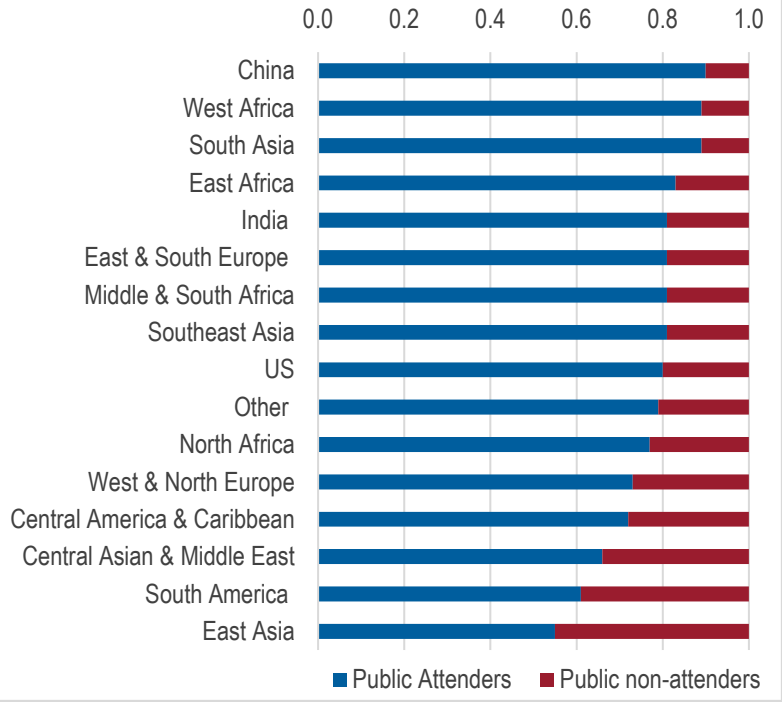
Public PSE Entry Analysis

On average across all cohorts, roughly 80 per cent of Ontario study permit holders appeared in the public postsecondary system (i.e., *public attenders*) leaving approximately 20 per cent outside of the postsecondary education system (i.e., *public non-attenders*).[6]

Figure 5 breaks down this information by region/country of citizenship. Permit holders from China, West Africa, and South Asia had the highest *public PSE attendance rate* (90 per cent), while those from Central Asia & the Middle East, South America, and East Asia had the highest proportion of *public non-attenders* with 34 to 44 per cent of their permit holders never appearing in public institution enrollment data (i.e., PSIS).

Over time, the proportion of study permit holders who did not attend public PSE remained stable across most

Figure 5: Public PSE attendance rates between 2010 and 2020



[6] The *public attender* label does not differentiate between students based on their level of engagement during their initial enrollment, such as who attended a complete semester. Rather the measure of public PSE entry captures which students appeared in the PSIS data. As it is based on institutional record keeping, it is possible that some students present in PSIS had low levels of engagement. The limited information about *public non-attenders* does not allow the analysis to discern which permit holders are not in PSIS because they (a) attended a private postsecondary institution, (b) never arrived in Canada, or (c) attended a public institution that did not supply data to Statistics Canada in a given year or due to a data error.

regions/countries of citizenship. Those from South America, Central Asia & Middle East, and East Asia had much lower shares of *public non-attenders* in 2020 relative to 2010 (by at least 10 percentage points), while those from India increased their share of *public non-attenders* by 14 percentage points.

The ratio of *public relative to non-public attenders* by gender was similar in 2010 but by 2019, men study permit holders were more likely to attend public institutions than women. By application location, we see that more mobile applicants (i.e., those who applied from a different region/country of citizenship or from within Canada) were more likely to be public attenders by 2019, while those who applied from their region/country of citizenship were less likely.

Younger students were more likely than older ones to be in public institutions in 2010, but by 2019 the proportions by age were similar. By destination, those headed for the GTA were less likely to be public attenders, likely due to more opportunities in the metro area for education outside the public system. Study permit holders headed for London and Ottawa in 2019 were more likely to be public attenders than the equivalent cohorts in 2010.

Those with prior education experience in Canada (more so for those with K-12/CEGEP experiences) had higher rates of attending public institutions than those who did not, with the gap increasing over time.

	2010 Share	2019 Share	p.p. Δ
Overall	76%	77%	▲1
Gender			
Male	76%	79%	▲3
Female	76%	75%	▼1
Application location			
From citizenship location	76%	72%	▼4
Different than citizenship	81%	86%	▲5
From Canada	76%	83%	▲7
Age			
24 or less	79%	79%	–
25 or more	70%	78%	▲8
Destination			
Ottawa	83%	89%	▲6
Greater Toronto Area (GTA)	74%	72%	▼2
Kitchener... & Stratford…	81%	84%	▲3
Hamilton-Niagara	85%	83%	▼1
London	73%	86%	▲13
Windsor-Sarnia	79%	76%	▼3
North Ontario	79%	78%	▼1
Prior K-12/CEGEP education in Canada			
No	75%	72%	▼3
Yes	86%	91%	▲5
Prior PSE experience elsewhere in Canada			
No	76%	76%	–
Yes	79%	80%	▲1
Study permit level	**2015**	**2019**	
ESL	53%	55%	▲2
College certificate	86%	79%	▼8
College diploma	87%	69%	▼18
BA	91%	90%	▼1
MA	91%	91%	–
PhD	86%	84%	▼2

In 2010, the share of public attenders among all permit study levels was 86 to 91 per cent (except for ESL). In 2019, however, among study permit holders at the college certificate and diploma level the share was considerably smaller, especially so for diplomas.

Discussion

The public Ontario higher education system remained the primary destination for study permit holders between 2010 and 2020. This statement remains true despite the gap in PSIS enrollment data for colleges in the first three years of the observed period.[7]

The pull of the public system across various demographic and study characteristics did not significantly change over time, except for those headed to the London region and older permit holders who were much more likely to enter the public postsecondary system in 2019 than they were in 2010, and those planning to study at the college certificate or diploma level who were increasingly less likely to be in the public system over time. The last of these changes could be due to the growth in availability of PCPP or private career college places over the period and the disproportionate increase in incoming college-level permit holders.

While this study cannot pinpoint precisely how many of the 144,000 Ontario study permit holders outside the public postsecondary system enrolled in private institutions (including PCPPs), tax data can be used to explore who among tax filers claimed education deductions, which represents a proxy for private institution enrollment (more on this below). The office of the Auditor General of Ontario (2021) reported that approximately 25,500 international students were enrolled in private career colleges and PCPPs in 2019-20. While our study uses a different data source to report on a different metric (annual cohorts of study permits issued), we estimate the upper bound of that estimate for permit holders from the 2019 cohort to be 23,543.

[7] The following colleges had missing data across most of these years: Cambrian, Confederation, Durham, Georgian, Loyalist, Lambton, Humber (only one year missing), Northern, and Fleming. International students from these institutions before 2013 would end up in the public non-attender sample (i.e., those outside the public postsecondary system). Based on Ministry of Colleges and Universities open data, these institutions could enroll approximately 25 per cent of study permit holders attending public colleges, approximately 7 per cent of the combined college and university sample.

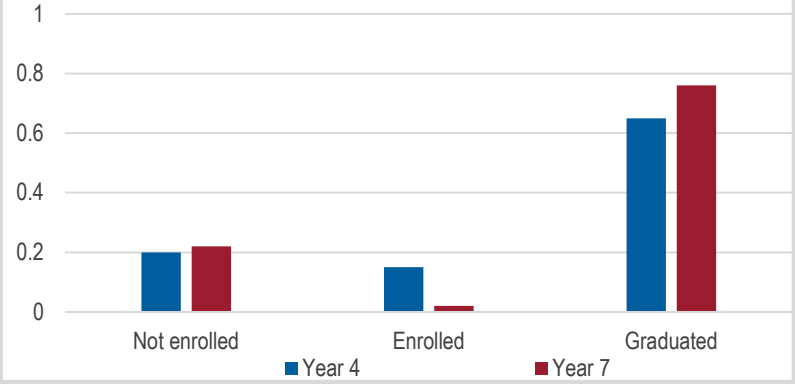
GRADUATION ANALYSIS

The schooling outcome analysis, which can only be performed for *public attenders*, revealed that four years after entering the public postsecondary system, 65 per cent had graduated, 15 per cent were still enrolled, and 20 per cent were not enrolled and had not graduated. Seven years out, graduation had increased to 76 per cent, only 2 per cent were still enrolled, and 22 per cent had left the system without graduating.[8] Graduation rates remained relatively constant from cohort to cohort.

Students from India had by far the highest graduation rate four years following public PSE entry with 81 per cent of them receiving a credential by that time. By year seven, graduation rates were also high among students from China, Middle and Southern Africa, and South Asia, while they were lowest for students from South America and East Asia. The following findings are taken from our regression analysis, seven years out:

- women were more likely to have graduated than men;
- permit holders who applied from outside their country of citizenship (i.e., students that were already mobile) were

Figure 6: Overall schooling outcomes of study permit holders in public PSE



[8] Other studies have found that graduation rates for people who entered full-time postsecondary programs (at all levels) were generally higher among international students than among Canadian citizens and permanent residents (Frenette, Lu, and Chan, 2019).

more likely to have graduated than those who applied from their country of citizenship;

- those who were older at permit application tended to have lower graduation rates than younger applicants;
- permit holders in postgraduate and baccalaureate programs graduated at higher rates than those in certificate or diploma programs despite these typically being longer programs; and
- those in science, engineering, and health were more likely to have graduated than those entering other fields and so were full-time students relative to part-time students.[9]

[9] Study permit holders encompass those who are on short-term educational exchanges, who essentially represent students that were not expected to graduate while in Canada. Given that undergraduate programs are more likely to house exchange students, their descriptive graduation rates tend to be lower than for those in certificate and college programs, but all else equal, undergraduates were more likely to graduate in four, five, six, and seven years than those in either certificate or diploma programs.

Discussion

The study did not capture the intentions of students when they entered the public postsecondary system; therefore we are unable to discriminate between students who planned to complete an entire program and obtain a Canadian credential versus those who intended to visit a school as part of shorter-term study abroad experience. These intentions *could* impact the proportion of students who graduate and the share of those whom we can expect to enter the labour market and remain in Canada.

While there is no data available on the share of exchange students within the international student community, individual institutional statistics shed some light. As examples, the University of Toronto reports welcoming 600 exchange students and 29,500 international students a year, the University of Ottawa reports a yearly average of 205 exchange students and 10,600 international students, and the University of Waterloo reports 140 exchange students and 8,600 international students.[10] We consider it reasonable to assume that exchange students do not represent a substantial share of the international student population (i.e., between 1.6 and 2 per cent) and subsequently are unlikely to pull down significantly the average graduation rate.

Phase I of the project also investigated co-op work and revealed that 34 per cent of international students who were issued a study permit received a co-op work permit within four years (a rate that increased over time) revealing that one third of the international students in public PSE worked for at least part of their studies.

[10] A SRDC search implied colleges do not share institutional statistics on the number (if any) of exchange students they welcome.

LABOUR MARKET ANALYSIS

Analysis of tax data reveals the labour market outcomes of study permit holders who filed taxes in Canada. Tax filing rates of *public attenders* and *public non-attenders* alike were very stable over the first five years following permit issuance. However, approximately two thirds (65 per cent) of those in the public postsecondary system filed taxes in Canada compared to only one in five (21 per cent) among those outside the public system. Indian permit holders in the public PSE system had by far the highest filing rate of (84 per cent) and those from most African countries tended to record the highest rates among public non-attenders. In fact, the differences in filing rates between *public attenders* and *public non-attenders* was smallest among African permit holders.

Of those who filed taxes, 81 per cent claimed education deductions among *public attenders* while 54 per cent did so among *public non-attenders*. These data provide one of the few ways to confirm that *public non-attenders* were in fact studying in Canada during a given year (and were not "no shows") in the absence of enrollment information. However, the education deduction measure is not perfect: we found it captures only four in five of the public attenders who were confirmed to be enrolled in school in PSIS. Thus, it is fair to assume that deductions were also under-reported by *non-attenders*. Indian permit holders

Figure 7: Tax filing rate among public attenders and public non-attenders by region/country of origin one year following permit issuance

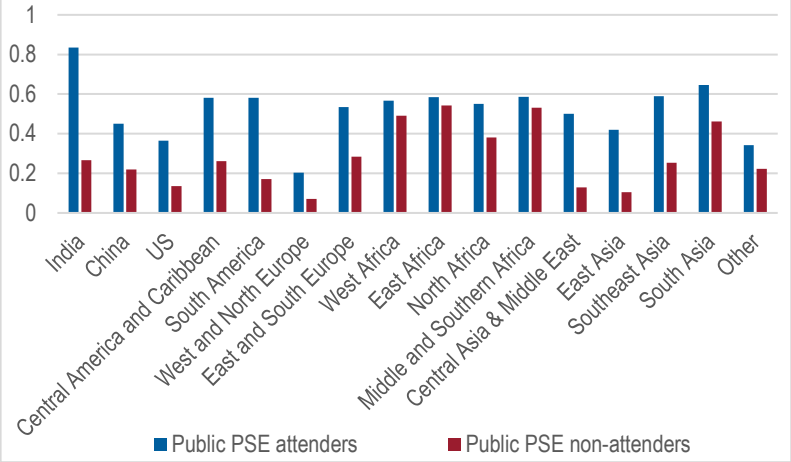
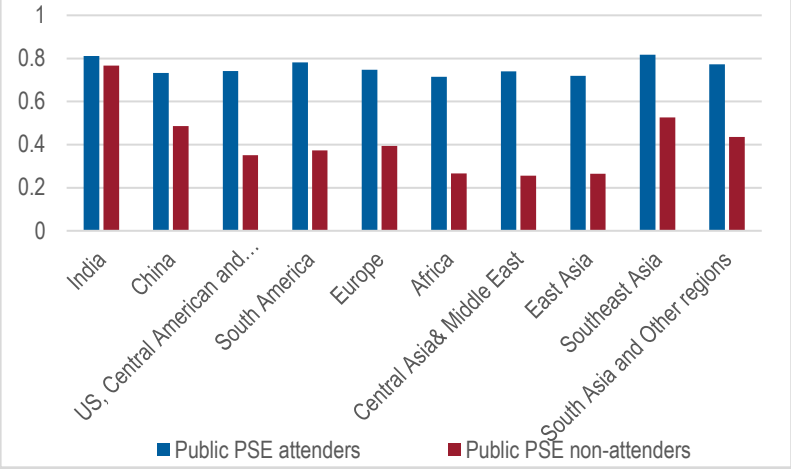


Figure 8: Rate of tax filers claiming tuition education deductions in the first year following permit issuance



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claimed education deductions at similar rates whether *public attenders* or *public non-attenders*.

Both *public attenders* and public *non-attenders* shared a similar rate at which they claimed earnings on their taxes. In the first year following permit issuance among those who filed taxes, 79 per cent of *public attenders* claimed at least some earnings (equivalent to 50 per cent of all *public attenders* in year 1) and 78 per cent of *public non-attenders* did so (i.e., 17 per cent of all *public non-attenders* in year 1). Five years out, 90 per cent of filing *public attenders* claimed earnings (57 per cent of all *public attenders* in year 5) and 85 per cent of *public non-attenders* did so (17 per cent of all *public non-attenders* in year 5).

Looking at average earnings, *public non-attenders* recorded higher average earnings than *public attenders* in the first year after receiving their study permit, but after the second year, *public attenders* earned more than *public non-attenders* and continued to do so until year 5 increasing the earnings differential to $6,000. This comparison does not account for graduation status as *public non-attenders* do not have enrollment information.[11] By region/country of citizenship, *public attenders* generally earned more than *non-attenders*, except in the cases of Middle and Southern Africa as well as West and

Figure 9: Average annual earnings by public PSE attendance since study permit issuance

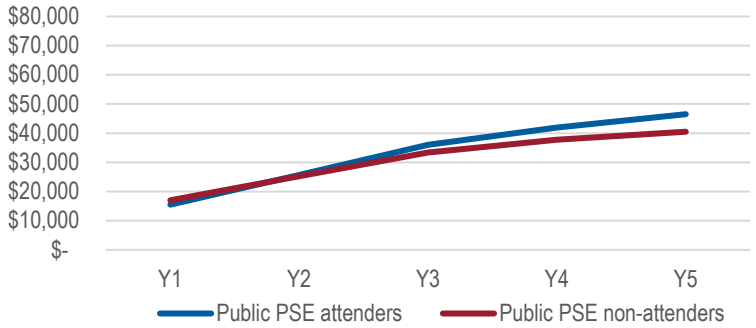
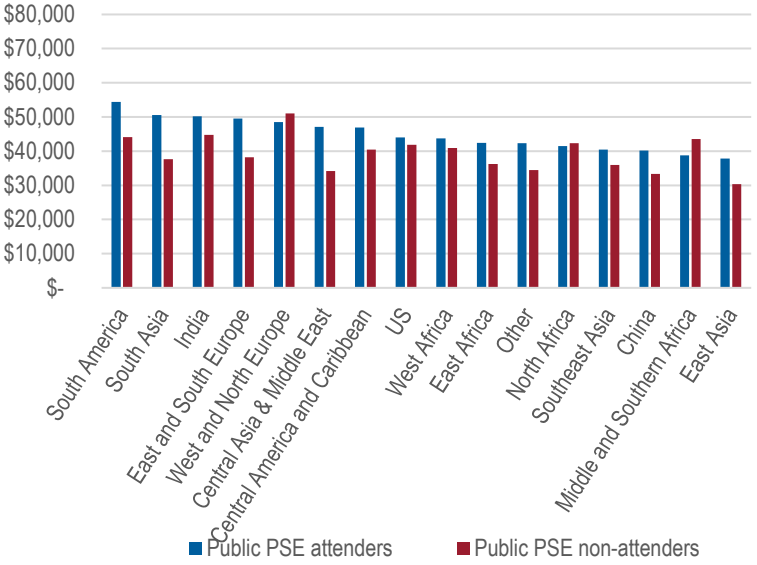


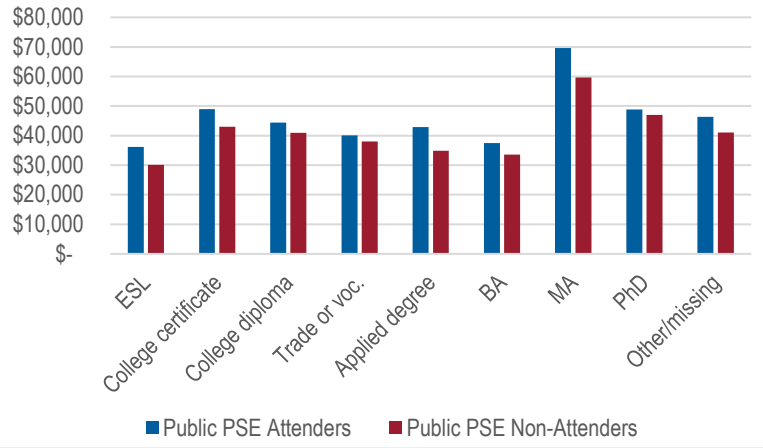
Figure 10: Five-year average annual earnings by public PSE attendance and region/country of citizenship



[11] Phase 1 of the project analyzed post-graduation earnings of *public attenders* up to five years following program completion. Their earnings started at $31,700, on average, in the first year following graduation and reached $57,600 five years later.

North Europe. Permit holders from South America, South Asia, and India earned the most five years out among *public attenders* and those from West and North Europe, India, and South America earned the most among *public non-attenders*. By study level, five years out, college certificate level permit holders earned more than those with other entry level programs on their permits (e.g., diploma, undergraduate), and those with master's level study permits earned significantly more than all other study levels, and this is true for both the *public attender* and *public non-attender* samples.

Figure 11: Five-year average annual earnings by public PSE attendance and study level



Discussion

The earnings analysis reveals that, on average, 43 per cent of all study permit holders reported earnings in their first year in Canada (i.e., 293,000), but those in the public postsecondary system reported earnings at higher rates (50 per cent of *public attenders* [i.e., 268,000] compared to 17 per cent of *public non-attenders* [i.e., 24,400]). These percentages likely underestimate the number of study permit holders working in Canada as migration plans represent a key motivation to file taxes. Five years later, for cohorts that able to be observed this long, the rate increased to 48 per cent for all study permit holders (i.e., 164,000): 57 per cent for of *public attenders* (i.e., 152,000) and 17 per cent of *public non-attenders* (i.e., 12,300). Interestingly, the rates across public non-attending cohorts remained relatively stable.

There is a change in filing behaviours and earnings reporting on a cohort-by-cohort basis. In the first year following receipt of their study permit, the earnings reporting rate for the first four cohorts studied (2010–2013) was approximately 26 per cent whereas within the last four cohorts (2017–2020) it was 53 per cent, double the rate of the initial cohorts. Both *public attenders'* and *public non-attenders'* rates of filing doubled from 2010 to 2020 (from 31 to 59 per cent for *public attenders* and 11 to 22 per cent for *public non-attenders*). This higher filing rate could be attributable to a variety of reasons: an increasing international student population could have encouraged greater awareness of tax responsibilities and support at institutions; permit holders from later cohorts may have been working towards permanent residency earlier whereby building a history of tax filing could be perceived as favourable; and/or increases in the international student population may have stimulated changes in work eligibility rules allowing a greater share of students to work while in school.

Levels of actual earnings generally increased from year to year (i.e., from year one to year five), but differences from one cohort to the next were not as clear. Relative to 2010, most later *public attending* cohorts earned less in years one and two. By year four, subsequent cohorts recorded increasingly higher earnings. Among *public non-attending* cohorts there were few or no differences in earnings in later years. In short, international students' tax filing rates are increasing and their earnings have increased as well (although not during their first two years).

RESIDENCY & MIGRATION ANALYSIS

The migration analysis does not rely on tax filing but instead on immigration data, meaning that the analysis can use the entire sample of Ontario study permit holders.[12] The analysis considers the shares of study permit holders who, on a yearly basis, (a) held study and/or work permits, (b) transitioned to permanent residency status, or (c) had no official status and likely left the country.

Approximately 7 per cent of public non-attenders had no permit by the end of the first year, which may point to potential "no shows." Based on the share of permit holders without an official status in Canada by year 8, we see that *public attenders* stayed in Canada for longer than *public non-attenders*, which may be due to them selecting shorter programs than those in the public postsecondary system or many simply be due to the nature of the programs/training they selected. By year 8, 54 per cent of study permit holders who were enrolled in a public institution had transitioned to being permanent residents and a 20 per cent of *public non-attenders* had made the same transition.

Figure 12: Yearly migration outcomes by public PSE attendance

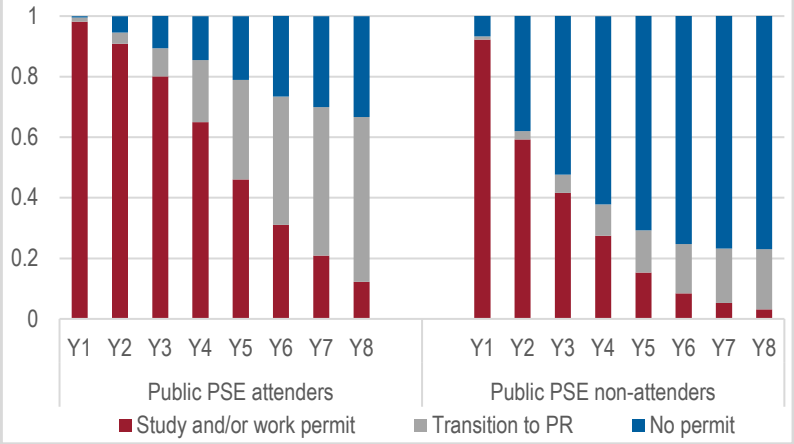
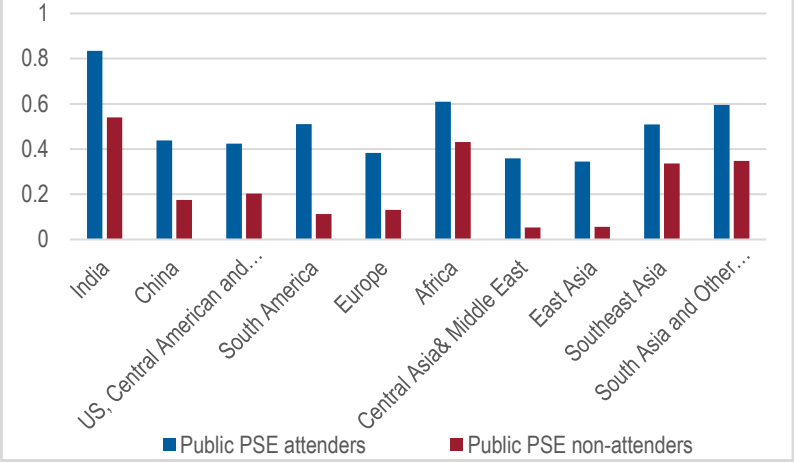


Figure 13: 8-year PR transition rate of study permit holders by region/country of citizenship



[12] It is important to note that the underlying cohorts included in each yearly analysis differ (e.g., only people who were issued a permit between 2010 and 2012 are available to be included in the eight-year outcome model), and therefore there is no data yet available in IMDB for more recent cohorts for whom longer-term migration outcomes will likely differ.

Focusing on eight-year permanent residency transition rates by region/country of citizenship and public attendance, Indian permit holders recorded the highest rates among both *public attenders* and *public non-attenders*, at 84 and 54 per cent respectively. In absolute numbers, this means that of all Indian international students who received their study permit between 2010 and 2012 (i.e., 31,250), 24,620 (or 79 per cent) transitioned to permanent residency within eight years. Study permit holders from Africa had the second-highest rates of permanent residency transition over the same period followed by those from South Asia and Other regions. Permit holders from East Asia were least likely to remain in Canada.

Regardless of whether permit holders were public PSE attenders or not, women, those who applied from within Canada, older permit holders, and those who pursued studies at the master's levels were more likely to become permanent residents than their respective counterparts.

For public attenders, as their field of study was recorded in PSIS, we can see that students who first entered education, math and computer science, engineering, health, and service fields were more likely to become a PR eight years after being issued a study permit than were students in business fields. The largest difference was for people who entered engineering and health fields who were 9 adjusted percentage points more likely to have made this transition.

Figure 14: 8-year PR transition rate of study permit holders by field of study, public attenders only

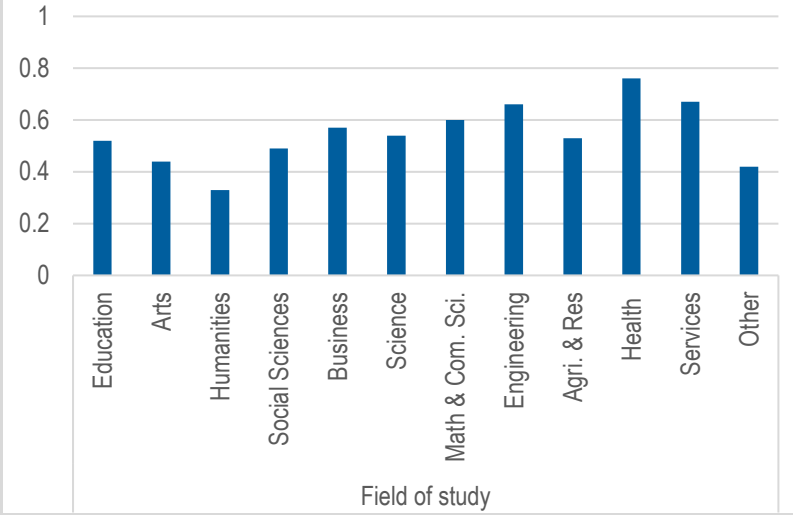
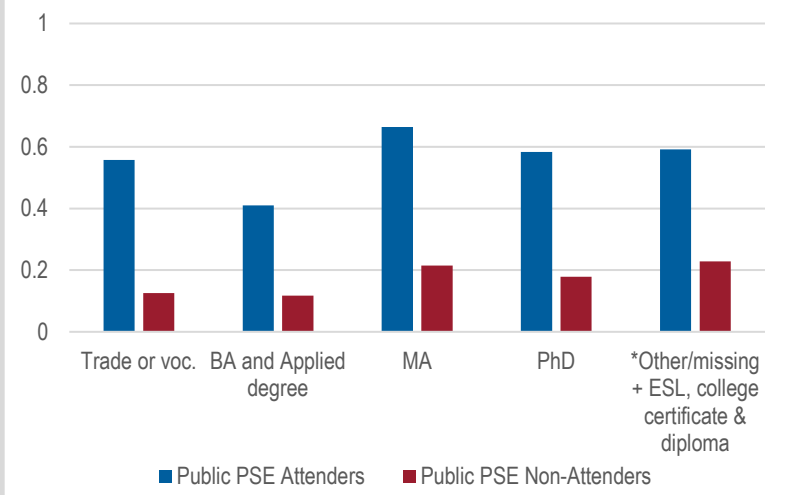


Figure 15: 8-year PR transition rate of study permit holders by study level and public PSE attendance



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Discussion

Tax filing rates in year 1 were similar to the share of permit holders who transitioned to permanent residency. A future analysis could examine tax filing as a potential predictor of transition to permanent residency or otherwise staying in Canada under a continued or different agreement (i.e., taking up further schooling or a work permit).

Public non-attenders seem to be coming to Canada as part of their education journey but fewer plan to stay than among those who attend public postsecondary institutions. Indeed, the majority (65 per cent) of study permit holders in the public PSE system are still in Canada eight years out (54 per cent became permanent residents and another 12 per cent still had study and/or work permits), while less than a quarter (23 per cent) of public non-attenders did so (20 per cent transition to permanent residency and 3 per cent remained on a study/work permit).

Certain regions/countries of citizenship had higher rates of transition to permanent residency which may be due to various factors: the program they selected and associated levels of demand in the Canadian labour market (which are often associated with immigration pathways), the presence of community supports and settlement networks (immigrant communities have differentially established stronger roots in certain parts of the province), language proficiency, and potentially their initial intention to immigrate even before starting their studies in Canada.

Conclusion

While international education is going through a period of considerable instability at the moment, SRDC's analysis offers a thorough empirical summary of the pathway of international students through the last decade of growth, which constitutes a good starting point for considering patterns of outcomes at different levels of student intake and composition over the decade. These data can inform discussions about the future of international education in Ontario and in Canada more generally.

The study followed international students' pathway chronologically from study permit application, the decision to enter (or not) the public PSE system, how students fair while in school (for those in the public system), their labour market and migration outcomes.

The overarching goal of HEQCO's consortium on international education is to answer two wide-ranging questions:

1. How can institutions, communities, and government support quality, accountability, and sustainability of international education in Ontario?

2. How can government and institutions support the transition of international students to successful labour market outcomes and immigration?

The study finds that it was the public PSE system that dominated, continuing to draw three quarters of study permit holders over the observed period, even through the large increase in incoming students between 2015 and 2019. In addition, even following this large influx of international students, graduation rates remained consistent over time. As caveats, better and later data is required to fully assess the schooling outcomes of more recent cohorts, given consistent upholding of this key success metric is important. However, the study cannot attribute stability of graduation rates to either the quality of the programing or to expectations set by the programs, as the lowering of either could have also contributed to a similar pattern.

For the data we have been able to analyze so far on the expansion in student intake, the story on outcomes seems to be “so far, so good” although more detailed data could help better benchmark the outcomes and identify areas for improvement. It would be valuable to continue to follow these outcomes to determine whether the system has been able to sustain similar transition rates to permanent residency and earnings for more recent cohorts. Whether recruiters, institutions, and immigration stakeholders were using similar messaging at the beginning and the end of the 2010s is unclear, but should PR transition and employment rates start to drop, some international students may feel they were being oversold on pursuing rewarding immigration pathways into to Ontario and Canada labour markets.

The number of international students with a co-op work permit and recorded earnings on a year-by-year basis increased over time, which could indicate increased opportunity for international students to work while in school. This is not only beneficial for their integration, their financial security and stability, coping with an increasing cost of living, but also for their future post-graduation labour market integration as they accumulate Canadian work experience. This last factor is often found to play a key role in international students’ labour market success. By their second year in Canada, half of international students had reported earnings. The rate is higher for more recent cohorts demonstrating how students have been contributing to the Canadian economy early on. Of course, not all international student experiences lead to work in Canada. Indeed, those outside the public PSE system are less likely to work than their public PSE counterparts, which could indicate that international students’ connections to the labour market from public PSE non-attenders may be more scarce or their relationship to training may be more transitory in nature than that of those in the public system.