



# **Parental Education and Postsecondary Attainment: Does the Apple Fall Far from the Tree?**

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## Executive Summary

Research conducted over the past two decades has revealed that parental education is an important determinant of PSE attainment. Students who come from a family where neither parent completed PSE are far less likely to pursue PSE themselves. As a result, the government of Ontario put in place policies that dramatically increased overall enrolment at universities and colleges. It also expanded financial assistance, capped tuition fees and provided targeted funding to institutions to support underrepresented students, including those whose parents did not complete PSE (known as first-generation students).

Using newly available data, we assessed whether the gap in PSE attainment between first-generation students and their counterparts whose parents attained a postsecondary credential has changed, and whether parental education remains a significant determinant of PSE attainment. We also examined whether first-generation students who do obtain a postsecondary education reap the benefits of their credentials once in the labour market, and what effect, if any, their parents' educational background has on their labour market outcomes.

Our findings reveal that a notable gap still exists in the PSE completion rate between first-generation students and their counterparts. Even among younger cohorts, a significant gap — more than 20 percentage points — exists and is essentially the same as that among older age cohorts. The situation appears to be particularly worrisome for young men. Our analysis indicates that parental education carries more weight in determining postsecondary attainment than other factors including family income.

Parental education is also an important determinant of educational pathways leading up to postsecondary. First-generation youth are more than twice as likely to drop out of high school as their non-first-generation counterparts. However, those first-generation students who do make it to postsecondary are more likely to complete a program than their non-first-generation peers, indicating that retention at the postsecondary level is not a significant concern — getting in the door is. And once in the labour market, they earn similar incomes and are just as likely to have jobs with pensions, bonuses, managerial status and job permanence. This illustrates the important role that education plays in closing the opportunity gap for first-generation students, and underscores the need for policy-makers to focus more intently on ensuring that all Ontarians have an equal opportunity to access and succeed in Ontario's postsecondary system.

Our findings indicate that while the province's policies have resulted in overall enrolment growth, they have done little to close the PSE attainment gap between first-generation students and their peers, despite a generous financial aid system and the provision of targeted funding for institutions to recruit and support these students.

We believe a new approach is needed to better serve first-generation students. Our analysis suggests that a first step to achieving equity of access would be to get underrepresented students to complete high school. Once in the PSE system, they fare well. We believe that government resources would be better spent and far more effective if targeted to supporting prospective first-generation students in the K-12 sector, and to influencing their educational aspirations and decisions made long before they arrive at the postsecondary doorstep.

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# 1. Introduction

Young people pursue a postsecondary credential with the hope and expectation that a good job will await them once they graduate. To be sure, a postsecondary diploma or degree provides more than just a steady income. Graduates have better health outcomes and experience higher civic engagement (DeClou, 2014). But to reap the benefits of PSE — financial and otherwise — you first have to get in. Research has shown that certain groups of young people are underrepresented in PSE. Students who come from a family where neither parent completed PSE, low-income students, Indigenous youth and students with disabilities are less likely to get in.

In this study we focus on students whose parents did not complete PSE (known as first-generation students) and examine the role that parental education plays in determining postsecondary completion. Research conducted over the past two decades has revealed that family education is an important determinant of PSE attainment. Students who come from a family where neither parent completed PSE are far less likely to finish high school and pursue PSE themselves. Those who do go are more likely to pursue college programs rather than university degrees. (Human Resources Development Canada, 2000; Drolet, 2005; Finnie, Childs & Wismer, 2011; Turcotte, 2011; Zhao, 2012). Some studies have shown that parental education is a stronger predictor of postsecondary attainment than family income (Drolet, 2005; Finnie, Childs & Wismer, 2011; Zhao, 2012).

As a result of these findings, the government of Ontario put in place policies that sought to improve access by expanding the overall capacity of the system. In addition, in an attempt to improve access for underrepresented groups, it expanded financial aid, capped tuition fees and provided targeted funding to institutions to support first-generation and other underrepresented students (Deller, Kaufman & Tamburri, 2019).

Using newly available data, we assessed whether the gap in PSE attainment between first-generation students and their counterparts whose parents attained a PSE credential has changed as a result of these policies. We also examined whether parental education remains a significant determinant of PSE attainment, if first-generation students reap the benefits of their postsecondary credentials once in the labour market and what effect, if any, their parents' educational background has on their labour market outcomes.

These analyses reveal whether policies implemented over the past two decades have achieved equitable access to PSE for first-generation students, and, if not, what more needs to be done.

## 2. Methodology

To answer these questions, we used the Longitudinal and International Study of Adults (LISA) linked to family tax files, a data set newly made available by Statistics Canada. For a more detailed description of the data methodology and analysis, see Appendix A.

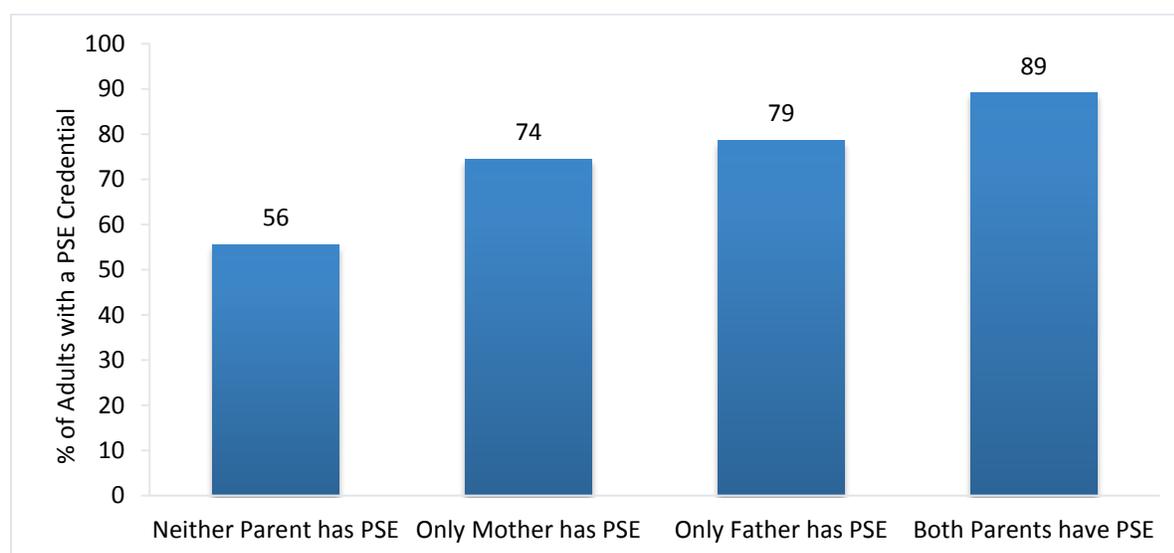
## 3. Results

### 3.1 PSE Attainment and Parental Education

Individuals are considered first generation if they are from a family where neither parent completed a PSE credential. Non-first-generation individuals are those who come from a family where at least one parent attained a PSE credential. We found that in 2014 nearly one in five Canadians between the ages of 15 and 24 were first-generation students.

The more educated one's parents, the higher the likelihood of completing PSE: 56% of individuals between the ages of 25 and 64 who were from families where neither parent obtained a postsecondary credential went on to complete PSE, compared to 89% of those from families where both parents completed a PSE credential.

**Figure 1: PSE Attainment by Parental Education, Canada (N=12,000)**



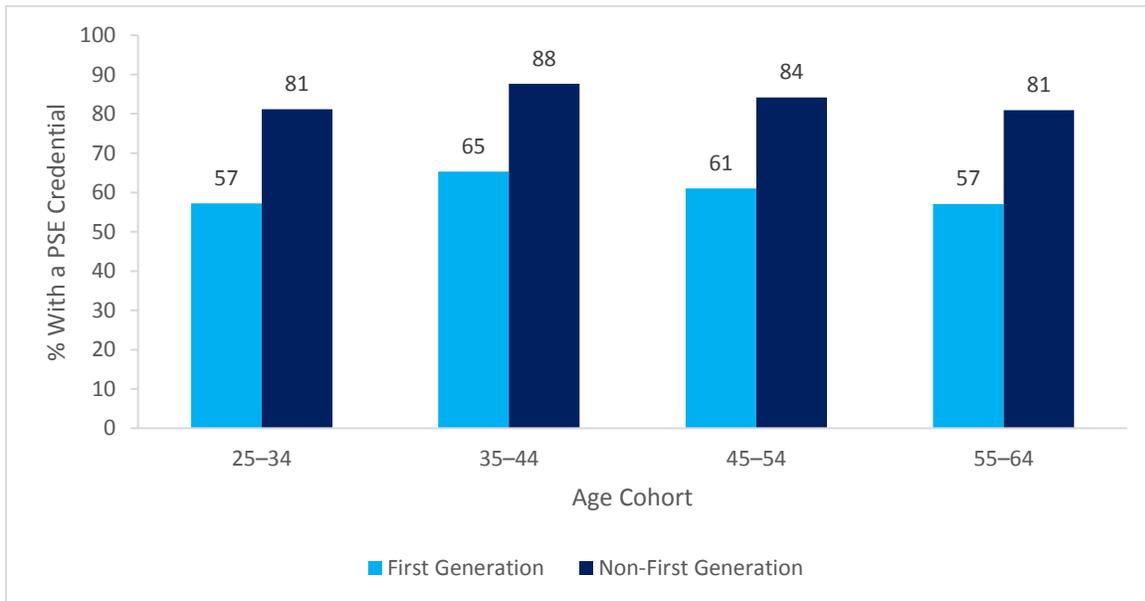
Source: LISA-IFF (2014)

Note: Includes adults 24–65 years old

The figures below show PSE attainment in Canada (Figure 2a) and Ontario (Figure 2b) by age cohort for first- and non-first-generation individuals. The attainment gap is the percentage point difference between the proportion of first-generation and non-first-generation students who completed PSE. In Canada, the attainment gap among 25–34 year olds was 24 percentage points, the same as that among 55–64 year olds; in Ontario, the gap was 21 percentage points among 25–34 year olds compared to 26 percentage points among 55–64 year olds.

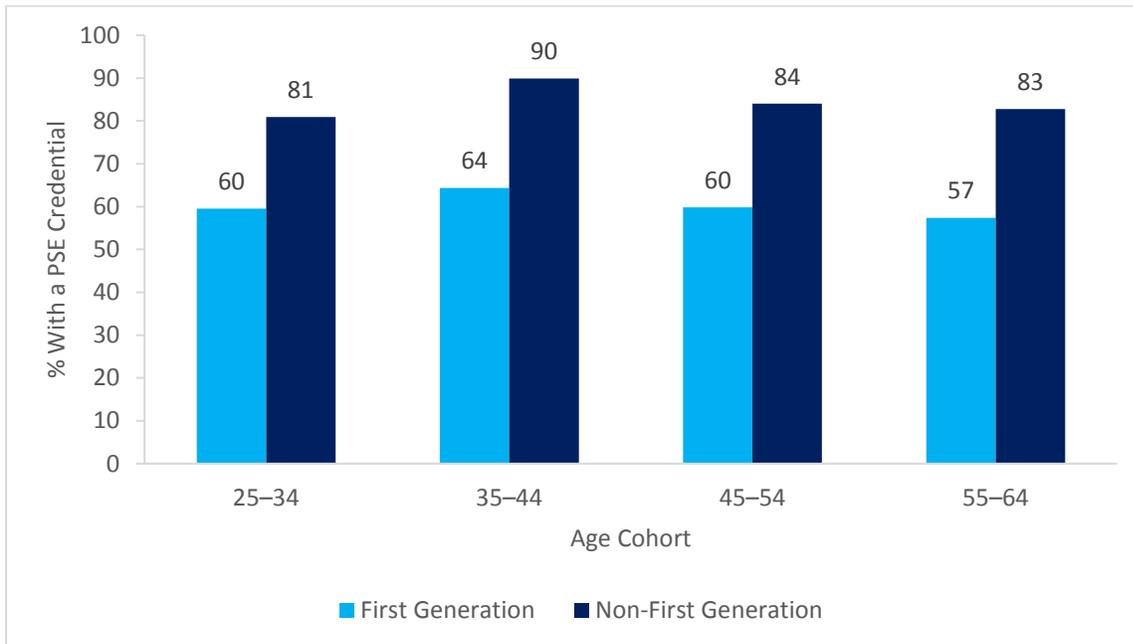
We recognize that this is a cross-sectional rather than a longitudinal study. Therefore, we cannot definitively say whether the attainment gap has changed or remained the same over time. However, our data indicates that the gap is little changed across age cohorts despite efforts by governments and institutions to address it. As part of our analysis, we also examined participation rates among first-generation and non-first-generation students, and found similar results.

**Figure 2a: Percentage of Individuals Who Completed PSE, by Parental Education and Age Cohort, Canada (N=12,000)**



Source: LISA-IFF (2014)

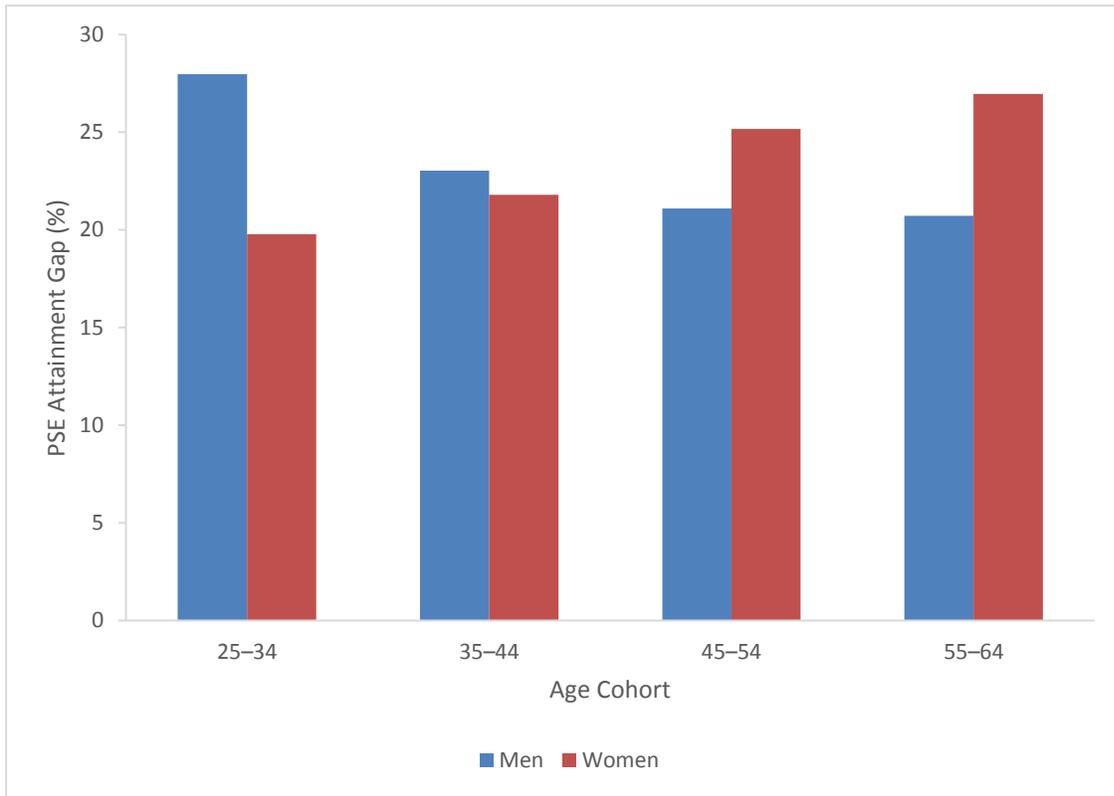
**Figure 2b: Percentage of Individuals Who Completed PSE by Parental Education and Age Cohort, Ontario (N=3,300)**



Source: LISA-IFF (2014)

Figure 3 shows the PSE attainment gap by age and gender in Canada. The attainment gap is lower among younger women than that among women in older age cohorts. However, among men, the attainment gap is seven percentage points higher among the 25–34 year-old cohort compared to the 55–64 year-old male cohort, and eight percentage points higher than women of the same age. This is consistent with research indicating that young men overall are less likely to participate and succeed in higher education than young women (Frenette & Zeman, 2008; Zhao, 2012).

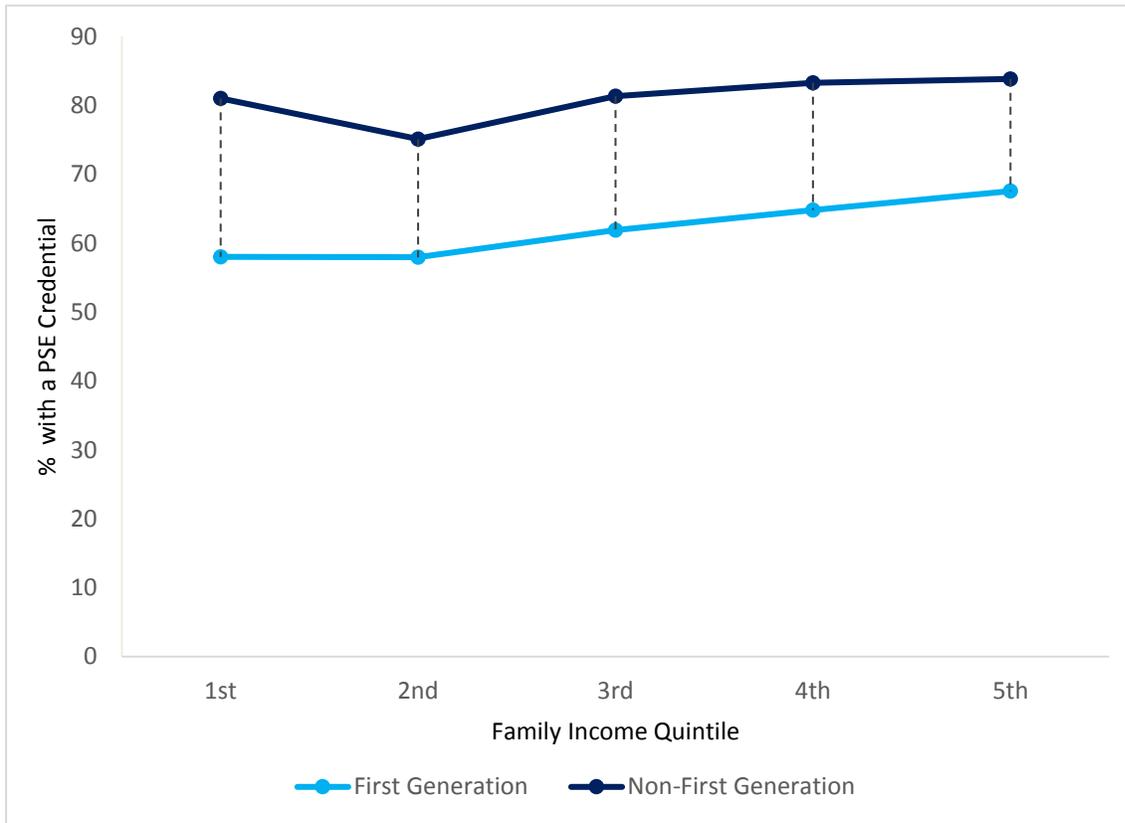
**Figure 3: PSE Attainment Gap by Gender and by Age Cohort, Canada (N=12,000)**



Source: LISA-IFF (2014)

We ran logistic regression models to assess the impact of multiple factors on the likelihood of completing a PSE credential. Tables B1 and B2 (Appendix B) show parental education is an important determinant of PSE completion. First-generation students are 19.3% less likely to have attained a PSE degree, even after controlling for other factors including family income. The addition or removal of family income from our model did not significantly change the size of the effect of parental education. Family income is also an important determinant of PSE completion. Nevertheless, about 30% of first-generation students are from families in the two highest income quintiles. And, as Figure 4 shows, a similar attainment gap between first-generation and non-first-generation students exists across all income levels, even among the highest income earners.

Figure 4: PSE Attainment by Family Income Quintile and Parental Education, Canada (N=5,300)

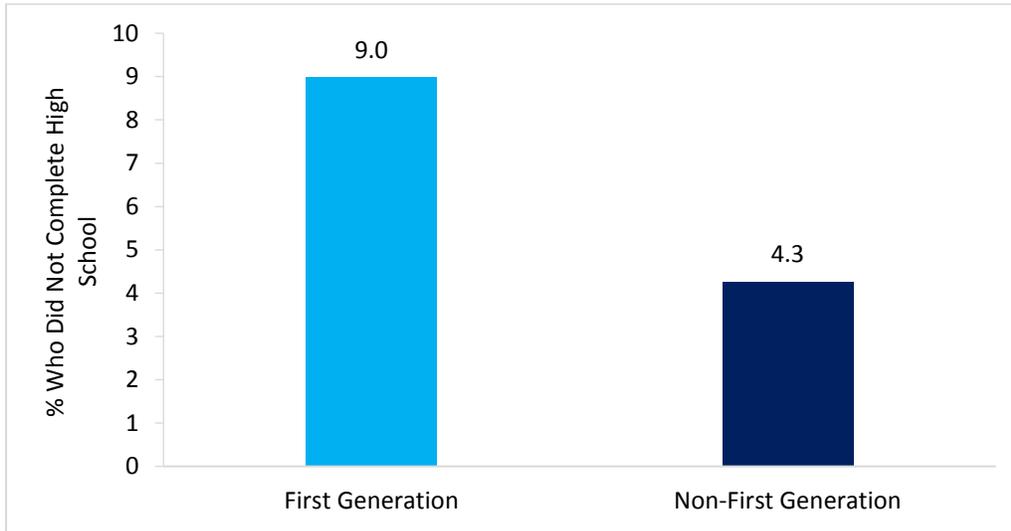


Source: LISA-IFF (2014)

### 3.2 Student Pathways to and through PSE

Almost all postsecondary programs require a high school diploma for admission. To better understand the origins of the PSE attainment gap between first-generation and non-first-generation students, we assessed the likelihood of students completing high school and the likelihood of their completing a PSE program. We found that 9% of prospective first-generation youth between the ages of 16 and 24 didn't complete high school compared to 4.3% of non-first-generation youth. While the difference in high school completion doesn't account for the entire gap in PSE attainment, it is a contributing factor.

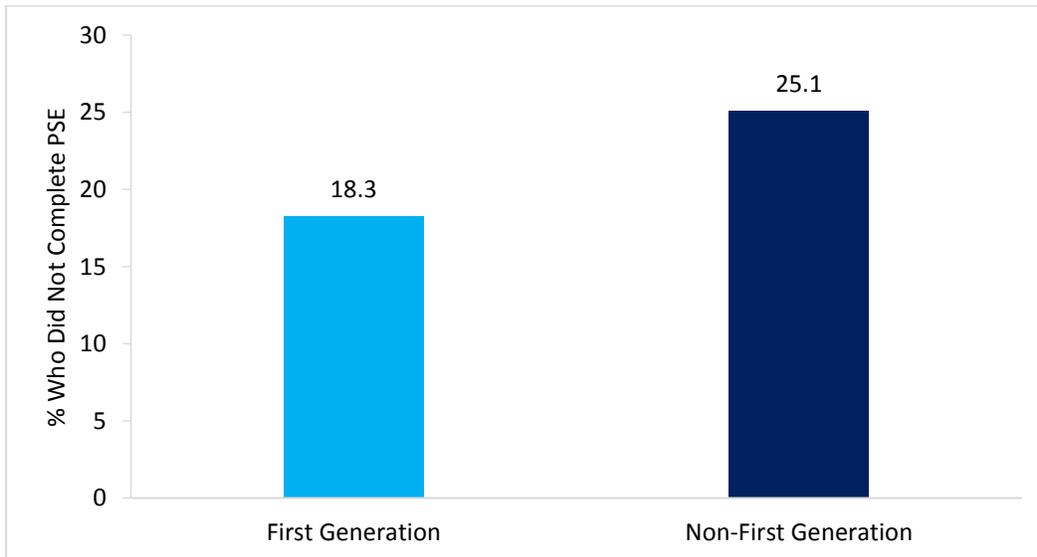
**Figure 5a: Percentage of 16–24 Year Olds Who Did Not Complete High School, by Parental Education, Canada (N=4,200)**



Source: PIAAC (2012)

However, first-generation students who did attend PSE, dropped out at lower rates than non-first-generation students: 18.3% of first-generation individuals didn't complete their program compared to 25.1% of non-first-generation individuals and 22.8% of all students. In other words, first-generation students who do make it to postsecondary are less likely to drop out, indicating that the retention of first-generation students at the postsecondary level is not a significant concern — getting in the door is.

**Figure 5b: Percentage of Those Under 30 Who Did Not Complete a PSE Program by Parental Education, Canada (N=3,100)**



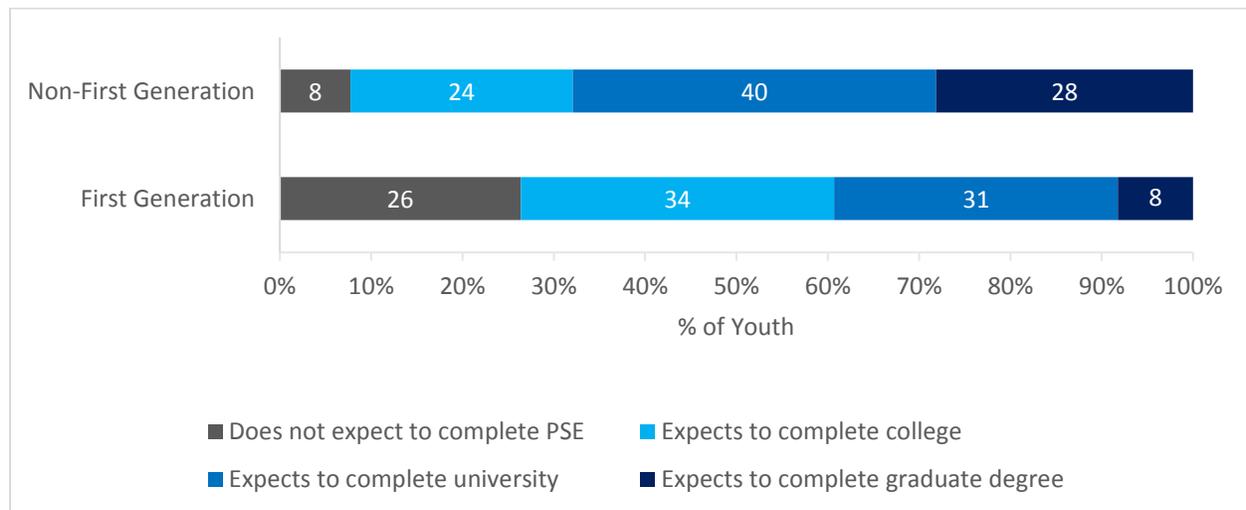
Source: PIAAC (2012)

### 3.3 Expectations of Completing PSE

Research shows that students' expectations about whether they will pursue higher education are set early in life (Finnie & Mueller, 2008). The next set of results focuses on differences between prospective first-generation and non-first-generation students between the ages of 16 and 24 who were not enrolled in a PSE program regarding their expectations for pursuing higher education. For this portion of the study we used the responses to the LISA survey. We note that survey did not include responses from those younger than 16 years old, nor were we able to isolate the responses to include only those who were of high school age.

We found that 26% of prospective first-generation youth did not expect to complete PSE compared to 8% of youth from non-first-generation families. And only 8% of prospective first-generation youth said they expected to complete a graduate credential or professional school, compared to 28% of youth from non-first-generation families.

**Figure 6: Expectations of Completing PSE among Youth, Canada (N=3,100)**



Source: LISA-IFF (2014)

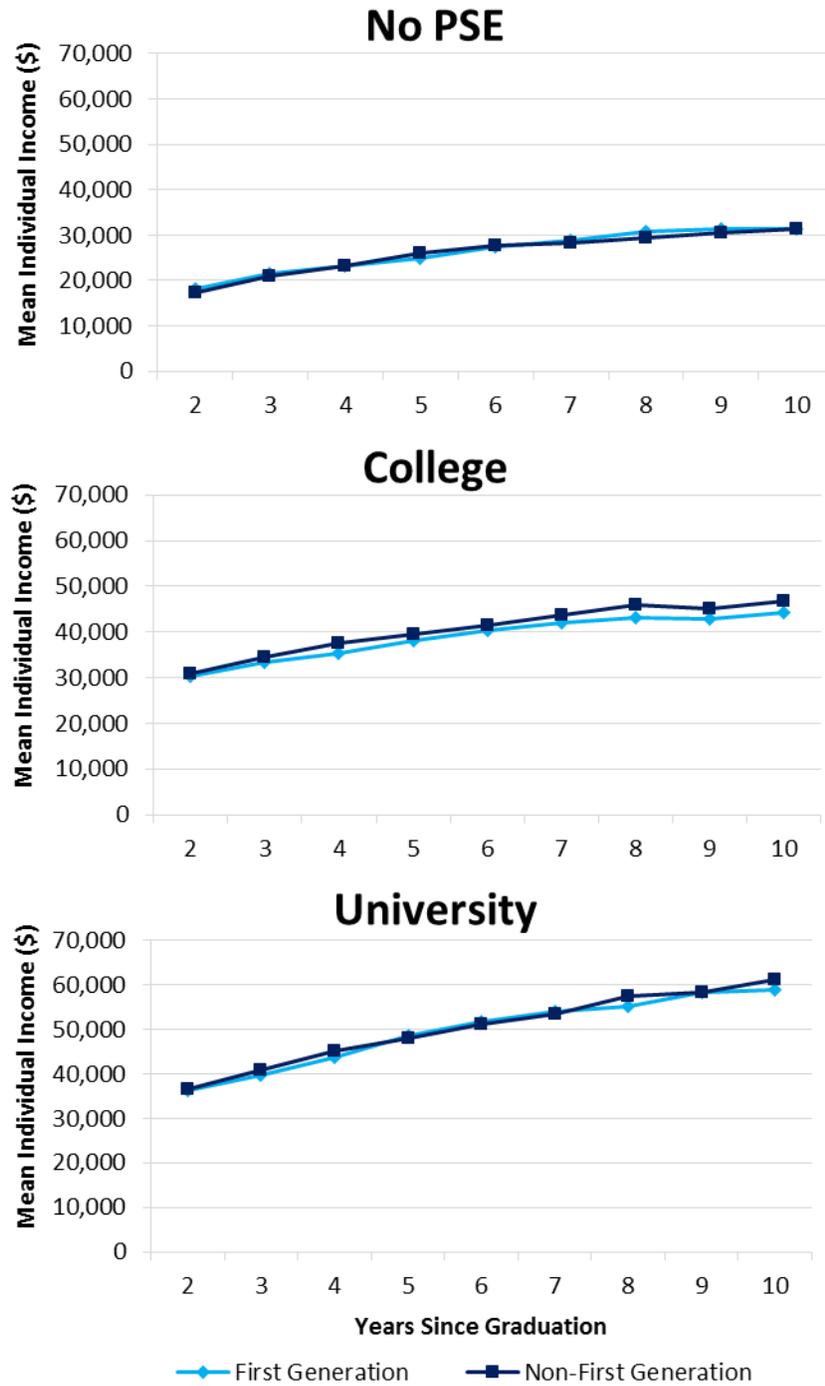
Note: Includes youth 16–24 years old

We ran logistic regression models to assess the impact of multiple factors on the likelihood of expecting to complete a PSE credential. Table B3 shows parental education is an important determinant of PSE expectations. Prospective first-generation students are 11% less likely to expect to complete a PSE credential, even after controlling for other factors including family income. The addition or removal of family income from our model did not significantly change the size of the effect of parental education.

### 3.4 Labour Market Outcomes

Next, we examined the relationship between graduates' postsecondary education and their labour market outcomes. First-generation students who completed PSE — as well as those who didn't — had similar earnings as their non-first-generation counterparts. We also found, as others have reported, that having a PSE credential was the factor that provided the biggest boost to future income. Those who completed PSE earned more than those who did not, regardless of parental education.

Figure 7: Average Individual Earnings by Parental Education, Canada (N=3,400)

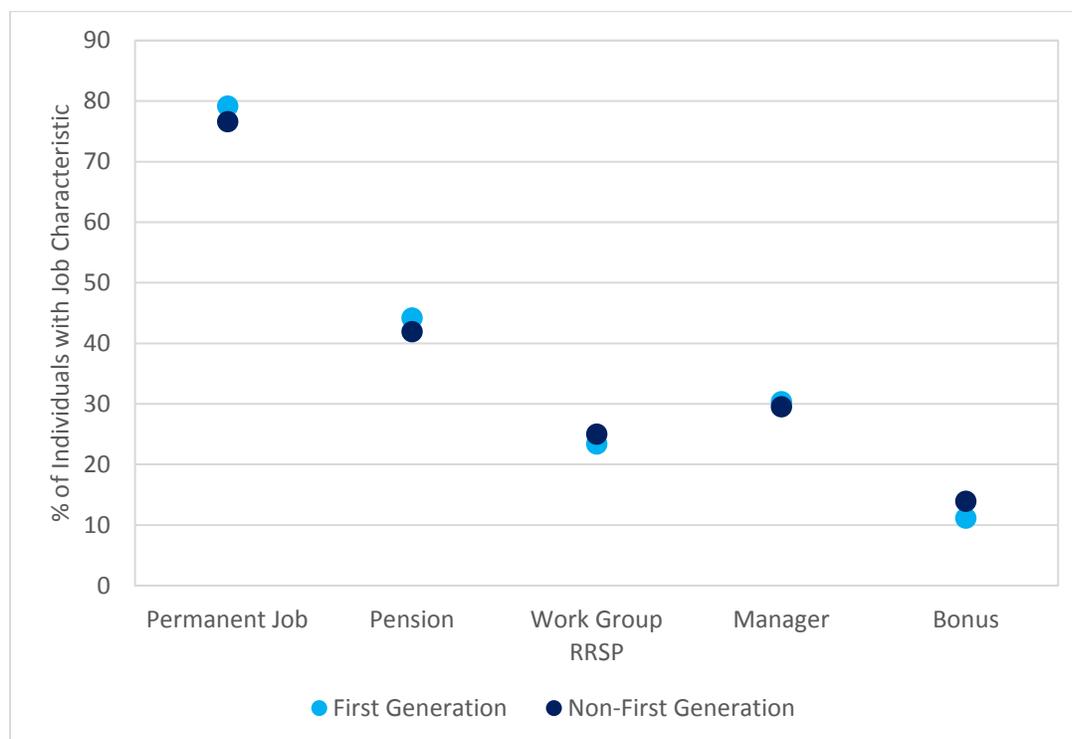


Source: LISA-IFF (2014)  
 Note: Adjusted to 2013 constant dollars

Our regression analysis of individuals' earnings at two and 10 years after graduating from university or college found that parental education was not a factor in determining the earnings of those individuals (Table B4).

We also examined job characteristics such as having a workplace pension or registered retirement savings plan (RRSP), bonuses, managerial status and job permanence. We found that the incidence of having these job characteristics for those between the ages of 20 and 50 with a PSE credential was virtually the same for first-generation students and their non-first-generation counterparts.

**Figure 8: Effect of Parental Education on Job Characteristics for Those with a PSE Credential, Canada (N=7,100)**



Source: LISA-IFF (2014)

We ran logistic regression models to assess the impact of multiple factors on the likelihood of having these job characteristics. Table B5 shows that PSE credential type is an important factor for most job characteristics after controlling for other factors. Compared to those without a PSE degree, university graduates are 31% more likely to have a pension, 16% more likely to have a permanent job and 8% more likely to be a manager. Parental education was not a significant factor in determining the probability of having these job characteristics.

## 4. Discussion and Conclusion

Using newly available data, we examined whether the longstanding gap in PSE attainment between first-generation students and their non-first-generation counterparts has changed as a result of government policies put in place to improve access for underrepresented students. Our findings reveal that the gap remains little changed.

We found that parental education remains an important determinant of PSE attainment. Even among younger cohorts, a significant gap — more than 20 percentage points — exists between the PSE attainment rate of first-generation individuals and their peers whose parents had obtained PSE credentials. This gap is essentially the same as that among older age cohorts.

The situation seems to be particularly worrisome for first-generation young men. Our findings show that the attainment gap is higher among first-generation men who are 25 to 34 years old than their older male counterparts as well as females of the same age. This is consistent with research indicating that young men overall are less likely to participate and succeed in higher education than young women.

Our analysis indicates that parental education carries more weight in determining postsecondary attainment than other factors including family income. Indeed, a similar attainment gap exists between first-generation and non-first-generation students across all income levels, even among the highest income earners.

We also found that parental education is an important determinant of educational pathways leading up to postsecondary, such as high school completion. Prospective first-generation youth are more than twice as likely to drop out of high school as their non-first-generation counterparts. Parental education is also an important influence on the educational expectations of young people. We found that 26% of youth from first-generation families did not expect to complete a postsecondary credential, three times as many as those from non-first-generation families.

On a positive note, first-generation students who do make it to postsecondary are more likely than their non-first-generation peers to complete a program, indicating that retention at the postsecondary level is not a significant concern — getting in the door is. And once in the labour market, they earn similar incomes and are just as likely to have jobs with workplace benefits, managerial status and job permanence. It would seem that first-generation students reap the benefits of their postsecondary education just as their non-first-generation peers do. This illustrates the important role that education plays in closing the opportunity gap for first-generation students, and underscores the need for policy-makers to focus more intently on ensuring that all Ontarians have an equal opportunity to access and succeed in the province's postsecondary system.

We acknowledge that this is a cross-sectional rather than a longitudinal study. Therefore, we cannot definitively say whether the gap in PSE completion rates has changed or remained the same over time. However, our findings are in line with previous research that found that first-generation youth were underrepresented in higher education. This appears to hold true today despite government policies that were enacted to support first-generation students and other underrepresented groups.

The federal and provincial governments spend billions of dollars on student financial assistance. This undoubtedly has provided and continues to provide valuable assistance to low-income, first-generation and other underrepresented students. Changes made to the program in recent years were designed to improve its effectiveness. Yet a significant gap exists in the PSE attainment rate of first-generation students, indicating that affordability is just one factor influencing PSE completion. While financial aid is an important tool, it cannot be the only one. In addition, postsecondary institutions spend almost \$200 million a year on programs designed to support first-generation and other underrepresented students. However, we cannot know for certain whether these programs are working because no evaluations have been conducted to assess their impact.

We believe a new approach is needed to better serve first-generation students. Our analysis suggests that a first step to achieving equity of access would be to get underrepresented students to complete high school. Once in the PSE system, they fare well. We believe that government resources would be better spent and far more effective if targeted to supporting prospective first-generation students in the K-12 sector, and to influencing their educational aspirations and decisions made long before they arrive at the postsecondary doorstep.

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