

How Student Pathways Affect Labour Market Outcomes: Evidence from Tax-Linked Administrative Data

Executive Summary

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The Education Policy Research Initiative (EPRI), a national research organization based at the University of Ottawa, recently carried out a research project examining post-graduation outcomes of PSE graduates by constructing and analyzing a dataset linking 14 Canadian PSE institutions' administrative data to tax data held with Statistics Canada. One variable included in the administrative data classifies students by applicant type, such as direct entry from high school or transfer student. Using information on the application types to their PSE programs and earnings records surrounding their spells of studies, EPRI aimed to construct and compare the earnings profiles of students who followed different PSE pathways.

We first compared the post-graduation earnings outcomes of direct entry students with those of students from other application type categories. The direct entry graduates were further divided into two groups based on their age at graduation to partially account for differences in their previous schooling and labour market histories. While we found differences in first-year earnings and subsequent earnings growth across different pathways, these differences were quantitatively insignificant compared to those found with respect to other graduate characteristics. Moreover, these earnings differences became quantitatively less significant relative to actual earnings levels as earnings generally grew at a robust pace after graduation.

In addition, we took advantage of the unique features of the dataset that allowed us to observe graduates' earnings even before graduation, and compared *pre-schooling earnings* to *post-schooling earnings* across four groups formed by direct-entry status and age at graduation. This comparison produced arguably the most interesting findings as to earnings differences among graduates from different pathways, together with the earnings dynamics of the older non-direct entry graduates. While the younger groups had relatively low pre-schooling earnings, as would be expected, the older groups generally had established labour market experience and therefore the change in earnings of these students around their PSE experiences could be interpreted in a "value added" perspective. Most interestingly, those older students generally demonstrated substantial increases in earnings in their post-schooling years relative to their pre-schooling years: i.e., significant value added from their PSE experiences.

However, it is important to highlight data quality issues underlying these findings. Since the applicant type variable had difficulty identifying the application types of all the graduates in the data, we could not examine potential heterogeneities among non-direct entry graduates. Thus, while this project may have demonstrated fruitful approaches by which PSE-tax linked data can be used to examine how PSE pathways are related to both pre- and post-schooling outcomes, more thorough analysis requires higher-quality data on PSE pathways, ideally full PSIS-type data for an entire jurisdiction so that specific pathways can be identified by the researcher by tracking students as they move through the entire PSE system.