

Barista or Better?

New Evidence on the Earnings of Post-Secondary Education Graduates: A Tax Linkage Approach

Executive Summary

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The skills that individuals develop play a pivotal role in determining their labour-market opportunities and life chances in general, and are of vital importance to a country's economic performance and many social outcomes. Post-secondary education (PSE) is a primary means by which Canadians obtain the skills that they need.

It is therefore essential to have accurate, up-to-date, and relevant learning and labour market information (LLMI) that is widely available so that all players in the PSE system – students making their PSE choices, PSE institutions deciding which programs to offer, policy makers, and the general public – can make informed decisions.

This is especially relevant at a time when we are often confronted with the now familiar barista trope – the suggestion (even assumption) that going to university, or college, particularly in a non-STEM (Science, Technology, Engineering, Mathematics) field of study, is a waste of time and will leave graduates stuck in a job with low earnings and little opportunity for career advancement.

Empirical data on PSE graduates' earnings constitute a critical element of the information that is needed. Current data sources, however, have significant shortcomings, including their relatively short-term nature.

In this context, the Education Policy Research Initiative (EPRI), a national policy-focused research organization based at the University Ottawa, has undertaken an innovative research project that uses administrative data on students provided by 14 PSE institutions from four Canadian provinces linked to tax records held at Statistics Canada to track the labour market outcomes of Canadian college (diploma) and university (bachelor's) graduates from 2005 through 2013.

Main Findings

Funded by Employment and Social Development Canada (ESDC) and undertaken in partnership with Statistics Canada, the study has produced a range of findings, which both support and, conversely, sometimes challenge popular preconceptions:

- Overall, 2005 bachelor's degree graduates had average annual earnings of \$45,200 (in 2014 dollars) in the first year after graduation, growing by 66% to reach \$74,900 eight years out.
- College diploma graduates who finished their studies in 2005 had mean annual earnings of \$33,900 (in 2014 dollars) in the first year following graduation, growing by 59% to \$54,000 eight years after graduation.
- Engineering, Mathematics & Computer Science, and Business graduates generally had higher incomes and greater earnings growth than others, but graduates of almost all other fields of study, including the oft-maligned Humanities and Social Sciences bachelor's graduates, also performed well. Fine Arts graduates had the lowest earnings levels. Very few graduates had truly barista-level earnings even to start, and they increasingly moved even further from that level as they gained labour market experience.
- Later cohorts of graduates generally had similar earnings patterns and the ranking of fields of study remained consistent as well, although some fields of study did have greater differences in earnings across cohorts than others.
- Immediately following the 2008 financial crisis, first year earnings of all graduates taken together (i.e., across all fields of study) first dipped, after having risen the two preceding years, but stabilized in 2010. Across the entire 2005-2012 period, earnings rose for later cohorts of graduates of certain fields of study, were stable for others, and declined for another set, but those declines could be described as moderate to substantial (at worst), rather than calamitous.

Next Steps

The dataset and analytical approach developed for this project represents a research platform that would allow for a wide range of new projects that would further improve our understanding of PSE graduates' labour market outcomes, including the following possibilities:

- Identifying the post-schooling labour market outcomes of specific groups of students, such as Indigenous, immigrant and international students, or those from low socioeconomic backgrounds (among others).
- Probing the relationships between labour market outcomes and particular schooling

experiences, such as being enrolled in a co-op program, taking specific sets of courses, or being exposed to innovative pedagogical approaches.

- Isolating the role of factors such as students' incoming grades and local labour market conditions in order gain a better understanding of the value added of PSE and to develop more meaningful key performance indicators (KPIs).
- Creating comparison groups of students who do not complete PSE and those who have not attended PSE to further identify the contribution of PSE to graduates' labour market outcomes.
- Looking at a broader set of student outcomes based on other measures available in the tax data, such as the use of income support programs (EI, Social Assistance, others), the establishment of families (marriage, children), or savings.
- Linking the PSE tax-linked data to other datasets so that more factors that affect students' outcomes and additional outcome measures could be included in the analysis.

The data linkage and related analytical approach developed for this study has demonstrated that it could also be scaled up and extended to more students at more institutions. One obvious strategy being developed uses Statistics Canada's Postsecondary Student Information System (PSIS), which gathers key student variables from PSE institutions in Canada. Using PSIS data linked to tax data, other sets of graduates not included in this study could also be covered, including graduate students, those in professional programs, certificate and trades students, and others.

An alternative approach to scaling up the current project would be to adopt the procedures used in this study to gather data directly from additional PSE institutions. While this approach would have the disadvantages of requiring separate data collections (as opposed to the PSIS approach which uses data already being transferred) and would not give the general coverage that the PSIS approach would provide, it would have other advantages, including being able to address a wide range of research questions that would lie beyond a PSIS-only data platform and its limited sets of variables available. A third, hybrid approach, would be to add additional variables to a PSIS-based dataset.

The Bigger Picture

While the tax linkage approach employed in this study makes Canada an international frontrunner in the study of education, skills, and labour market outcomes, other initiatives are rapidly developing elsewhere. If Canada moves too slowly, too piecemeal, or too unambitiously, it will soon be trailing its international counterparts.

A broader research agenda should, in particular, involve identifying the full range of skill sets that matter and determining the potential role of PSE in helping individuals develop these skills. These should include not only conventional discipline-specific skills, but also essential skills, higher order cognitive skills, and – in particular – “transferable” skills such as various communications skills, being able to work in a (multi-disciplinary) team environment, and to be continuously looking for opportunities to foster innovation that have been gaining so much interest in recent years. The research platform established in this study could play a key role in making progress on this new skills agenda.

Nothing less than a new policy research model, which brings together policy makers, data providers, researchers, and other stakeholders in order to move forward on a broad skills-focused research agenda in a timely manner, is required.