



## The OECD 2012 Economic Survey of Canada and the Relationship between Higher Education and Productivity<sup>1</sup>

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The report entitled, *OECD Economic Surveys: Canada 2012*, offers an exceptionally rigorous, in-depth, well-informed and well-documented review of policy and performance of Canada's economy and postsecondary system.

The report is divided into three parts. The first part contains an overview of the Canadian economy, a summary of the rest of the report and recommendations. The second part (Chapter 1) deals with innovation, and the third part (Chapter 2) is about higher education in Canada. For Canadian higher education practitioners, policy-makers, and researchers, this document shows us how others with a more detached, international perspective view higher education in Canada. People who are interested in Canadian higher education will benefit from studying and discussing the observations, conclusions and recommendations in this report.

In my comments, I will mention without elaboration two complex issues that I thought were handled extremely well in the report; then I want to identify a huge question that is left after reading the report. I will conclude with comments on a feature of Canadian higher education that seems to stand out in international comparisons and gives rise to questions about both data and policy.

One of the real strengths of the report is the discussion of how to finance postsecondary education in the most effective and equitable way. This discussion concludes with a convincingly argued recommendation to increase targeted, needs-based financial assistance to students, financed largely by a reduction in education tax credits.

I want to commend also the discussion of performance funding of postsecondary institutions in Canada. Many observers have complained that not only do some of the performance indicators used for funding not make sense, but they have a dubious relationship with stated public policy goals (Clark, Moran, Skolnik & Trick, 2009). The cogent critique in the *Economic Survey* is thus quite welcome. It is not unreasonable to hope that this critique could stimulate a re-thinking of present approaches to performance funding.

You could expect that in a document entitled, *Economic Survey*, which has only *two* chapters (after the introductory overview and summary), one of which is about tertiary education, a major theme would be the contribution of tertiary education to the economy. This is in fact the case. It would not be much of an overstatement to say that this relationship is the glue that holds the report together. However, it is not clear exactly what conclusion about that relationship the authors intend for the reader to take away from the report.

This report focuses on *productivity* as the key outcome indicator - a good choice, I think, because productivity is the major determinant of our standard of living. The report provides an excellent discussion of the literature on Canada's chronically, poor productivity performance, and identifies the major alleged correlates: low levels of investment in machinery and equipment; low levels of business expenditure on research & development; weaknesses in markets for venture capital; insufficiently strong competitive pressures; weak connection between research and commercialization; and perhaps some cultural factors in Canadian business and industry, like an exceptionally high degree of risk aversion and lack of enthusiasm for innovation.

These problems are not likely to be solved simply by increased expenditure on postsecondary education, since as the report observes: no other country in Canada's peer group displays such a wide divergence between its human resources and its research infrastructure on the one hand, and the R&D and patenting activity of its business firms on the other.

The report argues that innovation is the key to productivity, and Chapter 1 is about innovation and productivity. Of all the factors that affect innovation and productivity, the subject that is addressed in Chapter 2, the only other chapter, is tertiary education. The message that is at least implicit from this table of contents is that the area of policy that could make the greatest contribution to improving Canada's lagging productivity is that of tertiary education. Otherwise, in a two-chapter economic survey, why not devote the second chapter to business investment, competition policy, fiscal policy as it affects innovation and productivity, venture capital markets, or cultural barriers to innovation?

The problem with devoting the second chapter to tertiary education is that there's not much data provided in the report that suggests that weaknesses in tertiary education are a major source of Canada's weakness in productivity. In fact, most of the research that is cited concludes that the main explanations for low productivity lie in other areas than tertiary education.

About the only such claim about tertiary education that surfaces in a few places in the report is that of a possible correlation between innovation and the proportion of the workforce that has a bachelor's degree. However, the report provides little development of, and less evidentiary support for, the proposition that increasing the proportion of the workforce with a baccalaureate degree would ameliorate Canada's productivity problem. For example, the report cites research that indicates that there is "a weak commercialization culture" at Canadian universities (p. 79). In order to accelerate innovation, it would seem more useful to try to change that culture than merely to increase the numbers of students who are socialized into it. Moreover, though it's a simple correlation, the recent experience of Canada and the United States in regard to educational attainment and productivity would seem to fly in the face of such a proposition. Since 2000, while the historic gap in bachelor's degree attainment between the United States and Canada has narrowed substantially, the productivity gap has widened significantly.

The report seems to acknowledge that simply expanding tertiary education is not the answer. For example, in the area of Information and

Communication Technologies, the report states that the problem is not “an under-supply of individuals with the necessary educational qualifications, but rather [to] a lack of graduates possessing the right ‘package’ of core technical skills, industry experience, communications skills and business acumen that is increasingly sought by employers” (p. 111). Elsewhere, the indication given is that the problem is not a lack of university graduates but a lack of university graduates with an entrepreneurial mindset. The report also cites, apparently with agreement, the conclusion of Coulombe and Tremblay (2007) that improving the quality of education may be at least as important as increasing attainment rates. However, the report doesn’t go into the nature or determinants of quality in higher education. Nor does it accompany the laudable suggestion that better pathways should be created for lifelong learning and career development with advice on how to build better pathways.

Thus, besides what many authors have referred to as Canada’s productivity paradox, I am left with the paradox of witnessing an emphasis on tertiary education in a study of how to improve Canada’s productivity when policy reforms in other areas would likely make more of a difference. Part of the explanation of this paradox is that previous of the OECD economic survey reports on Canada have addressed some of the other factors that are believed to influence productivity. And whatever the context, it is useful to have the proficient examination of Canadian higher education that the report provides.

Early in the examination of higher education in Canada, the report indicates Canada’s standing in international comparisons of educational attainment. It is noted there that Canada ranks first among OECD countries in the proportion of adults aged 25-64 who have completed tertiary education, but that this is due largely to its remarkably high college attainment rate, as Canada ranks tenth in regard to the proportion of adults who have attained a university degree.

Such international comparisons are fraught with definitional and data problems, and I want to commend the authors of this report for pointing out how two factors contribute to making the relationship between college and university attainment look more unbalanced in Canada relative to other OECD countries than it really is. One is the tendency to count as postsecondary education much adult vocational training in the colleges that would likely not be counted as PSE in other countries. The other is a consequence of the unique Quebec educational system in which secondary school ends with Grade 11. Thus, seventeen-year olds who continue their schooling in a CEGEP are treated as postsecondary students, whereas in other provinces and countries they would be in secondary school. College attainment rates for Canada include many Quebec residents who have completed only one year of tertiary education beyond grade 12.

Unfortunately, the report does not provide an estimate of how much difference correction for these two factors would make in international comparisons of educational attainment between Canada and other OECD countries. The underlying question in regard to the first factor is “what is postsecondary education?” There are thorny issues involved in distinguishing postsecondary education from other forms of adult education (Skolnik, 2004). Canadian colleges award certificates and diplomas for a

great variety of learning activities. Norton & Lin have noted that according to the 2006 Census of Canada, only 39% of those individuals whose highest level of educational attainment was a diploma or certificate from a college completed programs of two or more years' duration. Another 49% were of one to two years' duration, and 12% were of one year or less (Norton & Lin, 2009). Norton & Lin are skeptical of the value of international comparisons of college attainment because of the great variety of types of credentials that are included in this category. They claim that "most observers feel international comparisons with these data are not meaningful" (Norton & Lin, 2009, p. 8).

While perhaps not as problematic as the college attainment data, the international data on university attainment are not as clear-cut as one might expect. In the International Standard Classification of Education<sup>2</sup> (UNESCO, 1997), programs are classified on the basis of their inherent characteristics rather than according to the type of institution in which they are provided. Thus, individuals who are counted in "university attainment" figures in reports such as the *OECD Economic Survey* have not necessarily graduated from a university. In fact, in some countries, the "university attainment figures include many individuals who have obtained a baccalaureate degree from an institution that is similar to colleges in Ontario and several other provinces. For example, in Germany about one-third of undergraduate students are in the *fachhochschulen* (Teichler, 2008), and in the Netherlands, about two-thirds enter the *hogescholen* (Huisman, 2008).

Many colleges in Canada now award baccalaureate degrees. The Association of Canadian Community Colleges estimated that as of January 2011, 41 Canadian postsecondary institutions with a community college mandate were offering 230 baccalaureate programs (Association of Canadian Community Colleges, 2011). It is very difficult to ascertain whether any of the individuals who have obtained baccalaureate degrees from these institutions are counted in the "university attainment" figures for Canada that are reported in the *OECD Economic Survey*. It is certain that individuals who have obtained credentials other than baccalaureate degrees from Canadian colleges are excluded from the university attainment figures. However, in some cases, other college credentials may be quite similar to baccalaureate degrees. A case in point is the advanced diploma awarded by colleges in Ontario.

Ontario colleges have about 600 advanced diploma programs. These are three-year programs that meet the learning outcome standards of a three-year baccalaureate program as described in the Ontario Qualifications Framework (Ontario Ministry of Training, Colleges and Universities, 2012). Insofar as these programs meet the same outcome standards as many three-year baccalaureate programs of Ontario universities and of postsecondary institutions in some other countries, a case could be made that the graduates of these college programs should be counted in Canada's university attainment figures. In contrast, "university attainment" figures for many countries include graduates of institutions other than universities. Moreover, as the minimum standard for recognition of a postsecondary institution as a university is higher in Canada than in some countries – the United States, for example – one might argue that international comparisons of university attainment contain a bias against countries like Canada. My study of international data on educational

attainment has led me to the conclusion that these comparisons overstate Canada's rate of college attainment and understate its rate of university attainment relative to other countries.

If instead of parsing the higher education credentials awarded by non-university postsecondary institutions into different categories, the data were organized to show what proportion of the population obtained its highest credential from a university and what proportion from a different type of postsecondary institution, Canada's educational attainment figures almost certainly would not look so different from those of many other countries. Additionally, it would be helpful to show the proportion of baccalaureate degrees that are awarded by institutions other than universities in different countries.

Such figures would show that many countries, particularly in Europe, have responded to similar pressures for more accessible, teaching-oriented, career-focused baccalaureate education by giving non-university postsecondary institutions a major role in the production of baccalaureate degrees (Taylor, Brites Ferrreira, de Lourdes Machado & Santiago, 2008). Whether Canada should move in this direction is an important question for higher education policy in Canada - but one which, perhaps because of the way that international data on educational attainment is organized, is not raised in the OECD report. That may be one of the few important questions of higher education policy that is not raised in the report, but its omission is significant because the type of high level, applied education that colleges can provide is valuable both for enabling more individuals to realize their potential and for improving Canada's productivity.

A newer version of the International Standard Classification of Education was adopted in 2011 (UNESCO, 2011) and will begin to guide data collection in 2014. It is possible that some of the problems noted in this paper will be ameliorated when the new classification kicks in. However, the practice of classifying postsecondary programs by their characteristics rather than by type of institution is continued in the new classification.

## References

1) A slightly shortened version of these remarks was presented at the seminar held to discuss this report at the Ontario Institute for Studies in Education of the University of Toronto on June 14, 2012.

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