

Discussion of “Is There Under- or Over-Investment in Education?”

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One of the real benefits of having educators and economists read each other’s work is that different perspectives can enlighten in ways that are not possible when only colleagues, no matter how critical, engage in the same task. This paper is an excellent introduction to the work of economists and the ways they would approach the task of answering the question: What are the benefits, to individuals and to society, of having more education?

The paper discusses methodological issues extensively, but discusses them in accessible ways. It matters, the paper argues persuasively, whether we think of gains for further education in averages or at the margin. The use of OLS estimates in regression equations is also analyzed, particularly as these estimates may be under- or over-estimates of effects. This sort of discussion, which can be arcane, is used effectively here to offset criticisms aimed at the incompleteness of the models typically employed. Similar equations are used in educational research for a variety of purposes as well, especially in accounting for multivariate effects on achievement.

Often, however, educational research operates at a lower level of abstraction than does this type of economic analysis. For example, where the paper discusses the construct of “educational attainment” to describe levels of schooling, especially levels resulting in diplomas and degrees, an educator is likely to describe the same construct as “educational credentials.” To the economist, a Bachelor’s degree may be usefully seen as common across jurisdictions, especially where the number of post-secondary years to attainment is identical. To an educator, however, the degree may have to be more specifically described in order for it to be meaningfully employed.

In some jurisdictions, the degree of Bachelor of Education may represent four years' post-secondary training in education-related course work. This is common in the United States. In Canada, it is more likely that the "Education" component of such a degree is much smaller and a larger element of the degree will be based on courses drawn from the Arts and Sciences. The importance of this distinction for hiring, for example, is often critical.

On the other side of this same coin, educators are much more likely to examine the achievement of students and systems in terms of curriculum-based assessments. It is useful to think of these achievements, the economists remind us, as intervening variables in models that look at longer-term effects. The questions as to whether levels of achievement on these school-related tests correlate with levels of success in the future are important ones, seldom asked and even less seldom, answered.

The issue of validity in data aggregation across Canada with its many educational jurisdictions is magnified even more when data are collected and analyzed across countries. The data amassed by OECD, for example, related to expenditures per student and levels of post-secondary education, by necessity, have to be defined in terms that enable all participating countries to be usefully compared. Yet it is in the breakdown of these global constructs that useful educational policies might emerge.

In Canada, for example, a major educational expenditure in many jurisdictions is "transportation." It is unlikely that such a category would account for very much of the educational expenditures in, say, Belgium. Both Belgium and Canada tend to operate discrete school systems according to language and religious groupings, but such may not be the case in Germany. In other words, the gross measures of percent of GDP spent on

education provides the opportunity for further examination, but in and of itself, begs more questions than it answers for the educational researcher. The trade-offs in amassing the data are recognized in the paper albeit in footnotes.

An additional set of issues arises in putting these analyses to use in formulating public policies. When constructs are defined at a high level of abstractness it becomes all too easy to confuse the indicators with the causes, a situation this paper avoids. An example of this type of indicator is “class size.” It is often used in educational discussion, probably because the data are easily obtained. The literature on the effects of varying class size, however, shows a very mixed result. It is likely the case the reducing class size may result in a variety of actions. Many of these actions would be related to the relief classroom teachers might feel with fewer students to supervise. Other actions would be related to changes in instruction, curriculum, and assessment that fewer students made possible. In other words, change in the level of number of students per class may allow certain changes beneficial to student achievement to occur but would not, in and of itself, ensure these changes.

Choosing at what levels to do the analyses is critical if the desire to use data to effect change in public education is to be met with success. In measurement terms, these are known as validity problems. Validity is less a characteristic of the data, although bad data can limit validity enormously, than it is a characteristic of how the data are interpreted and used. Lamenting the lack of use of data by practitioners may hide the fact that the data collected about education by others is simply not relevant to those charged with making changes. For example, the key variables that have been identified as being most likely to effect change are proximal to the classroom and school. Few of these

variables are likely to appear in large-scale assessment collections that rely on proxies and questionnaires for collection. To collect the data that would matter at this level may mean a different type of data gathering as well as different data.

A good start would be to combine the perspectives of different experts, as this conference has done, and then combine their talents at different levels of data gathering and analysis.