

# The market value of public education

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**Public education is both an important** public expenditure and a relevant in-kind transfer, often to the poorest households. It is usually provided free of cost to families. Therefore, it is important to evaluate this public effort adequately.

This One Pager is based on a paper (Soares 2019) that compares three methods to evaluate educational services and their distributive impact. For each method, the total value of public educational services was calculated by level, as well as their impact on income inequality, as measured by the Gini Index and Concentration Coefficient. Each method was then applied to Brazil, a country with good-quality, easily available educational, expenditure and income distribution data.

By far the most common approach in recent times has been to evaluate educational services according to their cost to the public sector—calculating how much it costs the State to provide them, and dividing that cost evenly among all families with children in the public education system.

The second method is to evaluate educational services using the labour market as the measure of their worth. The value of an additional year of education is calculated based on how much more individuals will earn if they study for an additional year.

The third method is to use the market for private educational services to measure the value of public education services. This involves matching private educational expenditures, paid for by students or their parents, with equivalent public educational services. The two are matched using test scores: this approach presupposes that test score data are a good proxy for quality of schooling.

All three approaches have conceptual problems. However, they are somewhat complementary, and looking at the results from all three may provide a reasonably complete picture of the distributive and welfare impacts of education.

## First method: Schooling is worth what it costs the State to provide it—

The advantages of this method are: (i) it is easy to do and understand; (ii) data requirements are modest—all that is needed is per student expenditures by level; and (iii) it does not change the size of the welfare budget: the benefits of public education are, by definition, equal to the taxes used to finance it.

However, there are several shortcomings. First, it assumes that all students are receiving the same public education, which is clearly not the case even if the State spends the same on each student, which is usually not the case. Second, it is not coherent with the theory of provision of public goods, according to which the welfare value of a public good is the sum of the marginal utilities of all its users.

## Second method: Schooling is worth what the labour market says it is worth—

The idea is to take the difference in present values of lifetime earnings of men and women with and without an additional year of schooling as

the value of that year of schooling. The main advantage of this method is that it ties the value of schooling to its real-world impacts. This allows for welfare-enhancing public schooling, especially if labour market returns are elevated, as is still the case in Brazil.

The three main disadvantages of this method are: (i) results depend on an arbitrary parameter (discount rate): there is no controversy-free way to calculate what it should be for a given country or person; (ii) it reduces the impacts of education to its future income component—many educators maintain that education has intrinsic value, independent of its effect on other desirable outcomes; and (iii) it cannot be used to value pre-school education with present data, since household surveys contain only the highest educational level completed; therefore, we do not know how much additional income is generated from having attended pre-school.

## Third method: Schooling is worth what the private education market says it is worth—

The third method is to use the private education market to attribute a value to public education. One possibility is simply to attribute the value of private education of the same level and in the same area to public schooling; however, private schools are often considered better than public ones. In the absence of a better systematic method, we consider quality as being measured solely by standardised test scores.

The advantage of this method is that it is anchored in what people are willing to pay for education—it will work anywhere public and private schooling coexist. Its main disadvantage is the existence of private and public education conditional on test scores. The second disadvantage is empirical: many developing countries and even many developed ones do not have good standardised test data. Nevertheless, tests such as those developed by the Programme for International Student Assessment (PISA) and others allow this method to be applied in various countries, at least at some grade levels.

**Results**—The results from the three methods are not far from each other; however, the labour market approach requires high discount rates to yield similar results to the other two. The cost and education market methods yield similar estimated values, which should not come as a surprise, since the private system is heavily influenced by the public schooling supply, as they use many of the same inputs (especially teachers).

All methods provide similar distributive results *ex ante* because the beneficiary children are roughly in the same position in the income distribution.

Regardless of the valuation method used, our conclusion is that the value of public education in Brazil is close to 6 per cent of household income and is quite distributive, reducing inequality by between 3 and 4 Gini points.

## Reference:

Soares, Sergei. 2019. "The Market Value of Public Education—a Comparison of Three Valuation Methods." *CEQ Working Paper*, No. 71. New Orleans, LA: Tulane University.