Conditional Cash Transfers and School Enrolment in Colombia

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Education levels in less developed countries (LDCs) rank far below those observed in the developed world: around 20 per cent of primary school-aged children and between 50 and 70 per cent of secondary school-aged children do not attend school in LDCs. This compares to non-attendance rates of 1 per cent and 30 per cent amongst primary and secondary school-aged children respectively, in developed economies.

Given widespread evidence on the importance of schooling for equipping individuals with the ability to earn more in the future and lift themselves out of poverty, the desirability of increasing education levels in LDCs is clear. The question is how can policymakers best finance and allocate scarce resources to increase education levels?

To design appropriate policies, one should tackle the root causes of non-attendance (or partial attendance) at school. In LDCs these causes are often financial:

- The *direct costs* of going to school in the form of outlays for travel, books and uniforms are likely to represent a sizeable slice of the household income pie. Many households may not have the means to meet these costs and may be unable to borrow funds, so cannot invest in the human capital of their children by sending them to school.

- The *indirect costs* of going to school are also likely to be substantial. By these, we mean the earnings that children forego by going to school instead of working, what economists call the "opportunity" cost of attending school. This cost is likely to be important to households, which often face income streams that are not only low, but also unpredictable from one month to the next, being subject to such forces as the vagaries of weather and the health of family members. As households generally only have limited access to loans and insurance, the earnings of children can help avoid periods of acute poverty. Indeed, it comes as no surprise that almost a fifth of children in LDCs work either full- or part-time (compared to only 1 per cent in developed countries).

As a result of this, education policies in a number of developing countries involve paying money to poor households. But since the goal of such policies is to increase participation in education, there is a string attached: the cash is only provided if the child attends school. Such programmes are known as Conditional Cash Transfer (CCT) programmes. Countries in which they are being implemented with the help of financial support from the World Bank and other international financial institutions include Mexico, Honduras, Nicaragua, Brazil, Turkey and Mozambique. So the question is, how far do these policies go towards increasing school enrolment?

A look at one such welfare programme, Familias en Acción, provides evidence on this. This programme was implemented in certain villages, referred to as "treated" villages, in rural Colombia in 2003, providing the monthly equivalent of between US$8 and US$16 (depending on the age of the child) per child who attends school, to households below a certain level of income.

To assess whether this policy increased school enrolment, one would like to know what school enrolment rates in treated areas *would have* been if the programme had not been implemented. Of course, this hypothetical situation can never exist! But if one could find areas that are very similar, apart from the fact that the programme is not implemented in them, known as "control" areas, then one could proxy the school enrolment rate in treated areas in the absence of the programme, using school enrolment rates in the control villages. This is a commonly used strategy amongst economists for assessing the effect of policy interventions on targeted outcomes.

In the case of CCT programmes, it comes down to comparing school enrolment rates in treated and control villages after the programme has been implemented. But with programmes such as these, policymakers generally target the most deprived areas, so it can be difficult to find similarly-deprived areas that are not receiving the programme - if treated areas were chosen completely randomly, the task would be much easier. However it is still practicable to find comparison areas as long as one is careful (in ways that I will discuss in the next two paragraphs), so that any observed differences in school enrolment may be attributed to the programme.

Care must be taken in ensuring that the treated and control villages really are very similar along dimensions such as location, average poverty levels, prevalent types of industry and agriculture, and school resources, to list but a few. If that is not the case, then there is no reason to expect enrolment rates in the two to be the same in the absence of the programme, so that school enrolment in control villages might not be a reliable indicator of enrolment in treated areas were the programme not in place. So the analyst must make sure to compare areas on the basis of as many characteristics as possible, to ensure that they are truly very similar.

Still, even if one chooses control areas that are very similar to treated areas, it may be that differences across areas still remain. For example, individuals in treated areas may have different tastes and preferences for education compared to individuals in control areas. Differences of this sort are not possible to observe. They are however important if they are likely to affect school enrolment, because differences in enrolment between treated and control areas would be due to both the programme itself, *as well as* to non-programme related unobserved factors.

To deal with this, one can assume that if unobserved differences between treated and control areas exist, they will be fully reflected in differences in enrolment rates between treated and control areas in the period *before* the programme. One can thus take them into account by netting them out of post-programme differences in enrolment.

An example might better illustrate this point. Suppose we find that school enrolment rates in the presence of the programme are 85% in treated areas (call this A^T) and 80% in control areas (A^C). Since school enrolment rates are five percentage points higher in treated than in control areas, one might be tempted to say that this is the effect of the programme. But suppose that in the period *before* the programme started, school enrolment rates are 82% (B^T) and 79% (B^C) in treated and control areas, respectively. So even without the programme, enrolment is three percentage points higher in treated than in control areas. Then the effect of the programme is not five percentage points, but rather two percentage points! In the notation above, this effect is estimated as $(A^T-A^C) - (B^T-B^C)$.

This evaluation methodology was used to investigate whether Familias en Acción led to increased school enrolment in rural Colombia. The effects were estimated separately in urban and rural areas, first for children aged 8 to 13, then for children aged 14 to 17. The subsidy was found to have the largest impact on the enrolment of 14 to 17 year olds, leading to an increase in school enrolment of approximately 5.5 percentage points in both urban and rural areas. Younger children in rural areas saw only modest gains from the programme, in the region of 3 percentage points, whilst school enrolment rates of children in urban areas were unaffected. Given the relatively high pre-programme enrolment rates of 8 to 13 year olds compared to 14 to 17 year olds, the relatively low impact of the programme on school enrolment rates in this age group was not surprising.

So the subsidies offered by CCT programmes certainly go some way towards lifting the financial barriers that prevent some households from investing in the human capital of their children. The programmes work by combining short-term poverty reduction through the immediate provision of funds to indigent households, with long-term poverty reduction through improvements in human capital. As these programmes are still relatively new, only their short-term effects in terms of poverty alleviation and increased education levels have been evaluated. The evidence on these is positive, and the hope is that long-term poverty reduction will naturally follow, though the extent of this remains to be seen.

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