When to use a CCT versus a CT approach?[1]

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July 4, 2006

I. The question raised

Following initiation of Progresa in Mexico in 1997, there has been an extraordinary proliferation of conditional cash transfers (CCT) programs oriented at social protection across the world. At the Third International Conference on CCT, the World Bank identified programs in progress in 20 countries, with a total annual budget of US$8.25 billion (World Bank, 2006). Many other countries are showing interest in using the approach, as adapted to their particular objectives and circumstances. In spite of this, there remains considerable debate, and some confusion, over when the approach should best be used over competing methodologies. Most particularly, a key aspect of the debate is whether cash transfers (CT) to poor households with children should be made conditional upon a pre-specified behavior by beneficiaries, thus becoming a conditional cash transfer (CCT). To derive maximum benefit from a transfer program, while avoiding disillusions with misplaced expectations about what it can achieve, it is important to clarify what is the true objective of the transfers, and to assess what are the benefits and costs of each approach.

Both CT and CCT have a targeting rule. It typically consists in focusing on chronic poor households with school age children. CCT additionally impose a conditionality on behavior consisting in meeting attendance/participation rules to a specified activity. For example, a CT would be a child support program for the poor. A CCT would be a child support program for the poor conditional on regular school attendance and on following specific health practices such as vaccinations and periodic check-ups. Note that the poverty reduction effect of these transfer programs is, by definition, confined to the targeted population (e.g., families with school age children) and the transfers made correspond to the support formula used (a defined amount per child of a certain age and gender).[2] CT and CCT are thus not designed to reach the totality of the poor population, neither are they designed to adjust the level of transfer to the depth of poverty. However, if the targeted group is a large share of the poor population, and if program administration is effective in avoiding leakages to the non-poor, these targeted programs, be they CT or CCT, may turn out to be superior to other social protection programs in reducing poverty per monetary unit transferred. This is what was observed in Mexico when comparing the progressiveness of the Oportunidades transfers to that of other social protection programs (World Bank, 2004).

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[2] Some programs transfer a fixed amount per household, regardless of its demographic structure.

Both CT and CCT have been advocated as anti-poverty programs combining a short-term effect through the transfer itself with a long-term effect through the increase in children's human capital investment that they induce. These two schemes are, however, likely to lead to a very different balance between these two outcomes. It is, therefore, essential to be clear as to which of these two objectives is the primary one for the program at hand before comparing the cost and benefit of the two approaches.

Based on both theory and empirical evidence from existing programs, we will argue that:

1. If the main objective is to transfer cash to the targeted categories of poor, CT should be used, unless imposing a conditionality is expected to help meet this objective.

2. If increasing use by the children of the poor of available school and health services is the program's objective, then a CCT can be expected to be a better instrument than a CT, if there is a justification for imposing a price distortion on household behavior and if the management cost of the conditionality is not so high as to erase the gains from imposing the condition.

We are not considering here the broader question of when to use a CT or a CCT targeted at families with school age children compared to other instruments of social protection (SP). The broader Progresa story in Mexico is indeed one of reallocating a given SP budget from urban food subsidies to a CCT targeted at rural poor women with children that go or could go to school from third grade of primary to third grade of secondary, with a condition of school attendance and health practices. We discuss here when to select a CCT vs. a CT once (1) the decision has been taken of using a transfer instrument, as opposed to, for example, a supply-side intervention to increase the number of teachers, and (2) the targeted population has been defined, in this case poor rural women with school age children, as opposed to for instance the poorest in a rural community.

II. When to use a CT or a CCT?

The rationale for using a CT or a CCT depends on the primary objective pursued by the transfer program, namely whether it is to transfer cash to the poor with children or to increase the use of school and health facilities among these children.

Let us first note that of the four combinations of objective and instrument (CT for transfer, CT for service use, CCT for transfer, and CCT for service use), only the first is independent of the supply of the services to be used to meet the condition. The other three all require that the supply-side of the service whose use serves as condition be accessible and adequate in both quantity and quality to accommodate the expected induced increase in demand. Otherwise, the CT and CT for use will not achieve their objective, and the CCT for transfer will generate frustrations among intended beneficiaries who will be denied the transfer for no reason of their own fault.

1. The program objective is to transfer cash to the poor with children

Theoretical considerations tell us that a direct cash transfer (or quasi-cash such as an infra-marginal food transfer) is optimal to achieve this objective, leaving to the household the leeway of using the cash as it sees fit to maximize its own welfare. Any constraint imposed on its behavior could only be welfare reducing. There are, however, two situations where imposing a conditionality may benefit the cash transfer objective.

1.1. The first is when the condition is used to increase the **political acceptability**, and hence the **budget size and sustainability**, of the program. This is the case if donors and the public prefer to transfer cash to "deserving poor with children", where being deserving is guaranteed good behavior in sending children to school and making use of health facilities (for whatever reason, moral/ethical or because it is seen as an important social investment). Larger budget size and greater sustainability due to higher political acceptability will benefit participants through higher allowances, or potential beneficiaries through a larger selected pool. Perception that the poor are deserving because they meet the conditionality may require that the condition would not have been met without the transfer, or that the constraint is being met and the poor are rewarded for good social behavior. Programs that give conditional transfers for primary school when the enrollment rate is above 95% without a transfer expectedly belong to this category of CCT. Paying 95 children for every one or two that would be induced to go to school via a CCT program is clearly highly inefficient from a pure school attendance point of view. Other approaches should be used to get these residual non-attending children to school.

1.2. The second is when the condition is used to make the transfer a component of a **voluntary contract** between state and beneficiaries which raises the pride and responsibility of recipients, reduces the stigma attached to receiving a transfer as a handout against nothing, and as a consequence increases **program uptake among the targeted beneficiaries**. This may be particularly important to the poor in shaping the perceptions they have of how they are being judged by the non-poor in their geographical and social proximity for receiving a transfer.

2. There is under-use of school and health facilities, and increasing their use is the objective of the transfer

A CT which increases household income will likely induce some increase in school attendance and in the use of health facilities, depending on their income elasticities and on the amount transferred. By contrast, a CCT, which is a subsidy to school attendance or to following specified health practices, has a price effect on the household choice. For a given transfer, a price effect is for sure not lower than an income effect, and higher unless there is absolutely no substitution among goods and services consumed by the household. On this ground derived from demand theory, a CCT should thus be preferred to a CT in achieving the use objective.

This policy instrument should, however, only be chosen (1) if there is a good justification for using a price distortion instrument to affect the household's optimal

behavior and (2) if its management cost does not outweigh its benefits in enhancing demand relative to a CT.

2.1. Using a price distortion is justified in meeting social or child welfare goals

Reliance on a CCT to induce greater and better use of school and health facilities is justified if constraining behavior will achieve goals that are desirable for social welfare or for child welfare that would not be met with a simple CT. This is the case when individual household behavior toward child human capital is not aligned with child welfare, and the program would like child welfare to prevail, or when private optimum in investing in child human capital differs from the social optimum, and the program would like the social optimum to prevail.

2.1.1. Individual household behavior is suboptimal for child welfare

i) Parents are ill-informed about the future benefits of education and health for their children, and as a consequence under-invest in child human capital

This may be for the following likely reasons, especially among poor parents:

- They are themselves **uneducated** and underestimate the benefits of education for their children based on their own experience.

- They live in a **community context** where there has been little benefit from education. This may be because only traditional agricultural practices are implemented, with no opportunity to use the benefits of education to achieve productivity gains (as rationalized by T.W. Schultz). Based on this local experience, they underestimate future opportunities to use education for productivity gains in the community (derived from technological and institutional changes, introduction of new activities, etc., all of which require at least some education) or outside the community (migration to urban labor markets).

- They are unable to combine optimally the components of **multi-sectoral** programs offering options in education, health, and nutrition. Because these services are complementary on child welfare, the conditionality helps them define the optimum combination.

ii) Parents objective function is not aligned with child welfare

- This is the situation when parents have a higher **discount rate** than their children. This is especially the case the poorer they are, and the greater the urgency is for them of using available resources for immediate survival. As a consequence, the poor tend to under-invest in education, and to keep their children at school for a shorter number of years. Under-investment may be larger for girls than boys if they move outside the natal household when they marry, truncating future benefits for investing parents.

Short-term gains for parents are at the cost of low investment in child human capital, reproducing poverty across generations.

- The mother does not have sufficient **bargaining power** in the household to defend the child's welfare against other claims on household resources. Channeling resources through the woman, to empower her over expenditure decisions, may be sufficient to restore this balance. If it is not, then conditionality is necessary to achieve this balance, removing child school assistance and health practices from the bargaining set, and reducing intra-household conflicts over investment in child human capital. In this case, the conditionality provides the mother with an effective commitment device.

- Parents maximize their **own security**, at the cost of future child welfare. This happens when there is a risk that educated children will abandon them in old age, for instance by migrating to the city or abroad. In this case, parents' life-cycle security is achieved at the cost of a net social loss for the household as a whole. This conservatism toward education is due to lack of a commitment device that would secure their benefits derived from better educated children in their old age.

2.1.2. *There is a discrepancy between private and social optima in investing in child human capital*

- This is the case when there are **positive externalities** from investment in child human capital (Das, Do, and Özler, 2005). As a consequence, parents under-invest in child education and health relative to the social optimum as they do not capture the totality of returns from investing in education. This is the classical case of a positive externality that justifies a public subsidy. It is the main reason why the supplies of primary and secondary education, and of basic health care, are delivered as public goods. Demand subsidies may in addition be justified if supply subsidies and unconditional transfers (CT) are insufficient to induce demand.

- Society anticipates that there will be **high future social costs** due to present under-investments in education. In this case, it is cheaper to invest in education through CCT than to incur future welfare and other social costs due for instance to increased crime and insecurity, lost labor and entrepreneurial contributions to overall economic growth, lack of informed participation to democratic practices, and continued under-estimation by future parents of the value of education.

We thus conclude that if the objective of the program is to induce a change in parents behavior toward greater use of school and health facilities in order to increase investment in child human capital, there exists a multiplicity of reasons that justify imposing a price distortion on parents choice. Once this is agreed, however, we still need to ascertain whether the benefits of the price distortion will out-weight the costs on imposing it.

2.2. The demand-inducement benefits of a CCT are not out-weighted by the management costs of the conditionality

It is unfortunate that we do not have solid evidence on the relative magnitudes of income (CT) and price (CCT) effects on demand for child human capital in different contexts. Obtaining this information requires experimentation that has surprisingly not been done, given the magnitude of the budgets spent on CCT programs. In spite of this, there are two sources of information showing that the human capital gain achieved through an identical transfer is much larger via CCT than CT.

The first is through micro simulating the impact on school enrollment of either a CT or a CCT. Using a transfer of the same order of magnitude as that offered by Bolsa Escola in Brazil, Bourguignon, Ferreira, and Leite (2003) find that, among poor households, 58% of the 10-15 years old not in school would enroll in response to a CCT. By contrast, when the school enrollment condition is not imposed to receive the transfer, the pure cash transfer has a zero effect on school enrollment. Hence, a CCT induces a large increase in child human capital when a CT does not. For Africa, Kakwani, Veras, and Son (2005), using cross-sectional correlations between income and school attendance, conclude that cash transfers would buy very little in increased school attendance, recommending against their use based on cost considerations. They consequently suggest using a CCT instead, but do not provide results on expected impacts due to insufficient information to use a micro-simulation approach.

The second piece of evidence is using observed program effect to measure the magnitude of an income effect versus a CCT effect on schooling decisions. For Progresa/Oportunidades in Mexico , the schooling decision is entry into secondary school for children who are graduating from primary school in poor rural communities. The CCT is exogenous in a randomized experiment organized by Progresa in 500 communities with treatment and control. The CT (household total expenditure) is not a controlled experiment. While this estimate thus suffers from endogeneity, stability of the estimated coefficients to introduction of a very large number of child, household, community, and state control variables gives confidence that any endogeneity bias would be very small (de Janvry, Sadoulet, Solomon, and Vakis, 2006). Results show that a dollar of CCT is about 8 times more effective in inducing school enrollment than a dollar of CT at the mean income of the poor. Using a very different methodology, Todd and Wolpin (2003) confirm this result. They estimate a structural model for Progresa and find that 80% of the impact of the transfer is due to the conditionality, with the remaining 20% due to the income effect. Finally, Schady and Araujo (2006), using lack of clarity in the understanding of a non-conditional cash transfer in Ecuador among a subset of beneficiaries, find that a significant increase in enrollment is only found among households who believed that there was an enrollment requirement associated with the program.

The vast literature on empirical analyses on income effects in the demand for education gives us information about the expected educational response to cash transfers. Even though results vary by context, they indicate that income elasticities of education are notably low among the poor and frequently insignificant. In their review of 42 studies covering 21 countries, Behrman and Knowles (1999) find that this relation is

insignificant in 40% of the cases. Unconditional cash transfers, such as the South Africa old age pension system, have been observed to increase child schooling in households where the pensioner is a black male (Edmonds, 2005). The effect is, however, insignificant when the pensioner is a female and for school age girls. Because these households do not have access to credit, even though transfers are fully anticipated by those who are just short of retirement age, they cannot smooth education expenditures. Households that will soon become eligible for a CT thus serve as an accurate control group for those who have just become eligible. Results show that it takes a CT which is more than six times larger than the Progresa CCT (in percentage income gain for the beneficiary households) to achieve the same 11-12 percentage points increase in secondary school enrollment as with Progresa

We can thus conclude safely that a CCT is considerably more effective than an unconditional CT in altering behavior toward schooling. How large this effect is depends on particular contexts, requiring randomized experimentation to obtain rigorous measurements.

Whether a CCT should be used over a CT depends, however, on whether the cost of implementing the conditionality is not so large as to erase the benefit on demand response. In the context of middle income countries such as Mexico and Brazil, where relatively good civil registry and school administration are in place, we know that management costs of a CCT are in fact quite reasonable (Caldes, Coady and Mal luccio, 2006). Even in this context, however, much remains to be learned about more effective ways of running these programs, optimizing in particular the potential benefits offered by e-management and e-transfers, and by more accountable decentralized approaches. In low-income countries, with weak and sometimes non-existent civil registries and weak school management systems, much remains to be learned. Administrative solutions will inevitably be quite different from what they are in the middle-income countries. If these programs are to expand in these countries as they have in middle-income countries, it is urgent that experimentation with alternative approaches be organized, so that best practice is identified before scaling up is implemented.

III. Conclusion

Unnecessary confusion remains about when to use a CT vs. a CCT approach, in part because these programs are too often put into motion without being sufficiently clear or informed about objectives, perception of reasons to intervene in household choice, and costs of managing a conditionality. Yet, once these are established, it is quite possible to clearly delineate when a CCT approach should be a desirable component of social policy. We saw in this note that a CCT will be preferred over a CT:

1. When the main objective is to transfer cash to poor households with children, and imposing a conditionality is expected to help meet this objective better. If there is no need for the conditionality to achieve larger budgets via political support or to induce a larger uptake via perception of lesser stigma, then unconditional transfers are clearly superior.

2. When increasing use by poor children of available school and health services is the program's objective, there is justification for imposing a price distortion on household behavior, and the gains from imposing the condition are not erased by management costs of the conditionality. In all cases, program participation is of course voluntary on the poor. Imposing a condition can consequently never lead to a loss of welfare relative to the counterfactual of no program.

Being clear about when CCT is the best practice is important to avoid potential disillusion with the approach if it is implemented for the wrong objective or under conditions that do not offer a high likelihood of success. To the contrary, when objectives and conditions for success are aligned, these programs have shown that they can be quite effective.

Continued experimentation with program design is needed to make the CCT approach more cost effective, particularly in country contexts such as in Africa that will be eventually quite different from the middle-income country contexts where they were originally introduced. Important as well is to learn how to balance CCT programs with other components of social policy. Effectiveness of these programs for both transfer and increased service use requires complementary programs to manage the supply side of services and to accommodate the heterogeneity of behavior across targeted households. Finally, CCT programs can also serve as effective safety nets to shelter children from being used as risk-coping instruments when parents are hit by a shock. The conditionality can deter parents from taking children out of school, with the long term irreversibilities on child educational achievements that a short term absence from school implies. To capture these different sources of efficiency gains in using and implementing CCT programs, experimentation with alternative approaches is also urgently needed.

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