

Comments

Ximena Peña: The well-measured success of the Mexican *Oportunidades* cash transfer program, formerly known as Progresa, has led many countries to design similar programs, including rigorous evaluation schemes. This paper evaluates the impact of Ecuador's *Bono de Desarrollo Humano* (BDH) on the school enrollment of children aged six to seventeen. Two special characteristics of the BDH implementation make its evaluation challenging and the results, in turn, quite interesting.

First, treatment is potentially endogenous since unmeasured characteristics may affect both the likelihood of receiving transfers and enrollment. The program originally followed an experimental design in which lottery winners received transfers and lottery losers were to be incorporated into the program at a later date, thereby providing a control. At baseline, there were no significant differences between lottery winners and losers in a wide set of covariates, including enrollment. Actual treatment, however, differed from the random assignment: 22 percent of lottery winners did not take up the program, while 42 percent of lottery losers received transfers. This translates into significant differences between treatment and control groups in several covariates at baseline, notably enrollment. In determining the impact of BDH on enrollment, the authors estimate the Intent to Treat and regress school enrollment at follow-up against the lottery outcome in addition to the appropriate controls. Their results suggest that the Intent to Treat increased enrollment by 3.2 to 4.0 percent. They get very similar results when they repeat the estimation using changes in enrollment between baseline and follow-up as the dependent variable. With the same dependent variable, they use the lottery outcome to instrument for actual treatment and estimate the effects using two-stage least squares. They find an increase in enrollment of between 9.2 and 11.4 percentage points. These results are large compared with other findings in the literature, especially since they are not focusing on the specific age groups for which impacts are highest. In other countries, transfers have the

strongest impact on enrollment at stages with high dropout rates; the authors similarly find that the impacts are highest among children facing transition grades (five or eight completed years of schooling) when school abandonment is high. Other than transition grades, impact is only significant at nine completed years of schooling. The program is thus ineffective at increasing enrollment at other stages of education.

Second, even though transfers were delivered with no strings attached, around one-fourth of the treatment group believed attendance was mandatory. Conditions on school enrollment and attendance were included in the program design and advertised at informational town-hall-style meetings, in radio and television spots, and at sign-up. In practice, however, conditions were never monitored and noncomplying households were not penalized. Nevertheless, the follow-up survey revealed that 27 percent of beneficiaries believed that school attendance was a prerequisite to receiving transfers. Using only lottery winners, the authors estimate the effect of conditionality on enrollment. Since the distribution of covariates differs at baseline between conditioned and unconditioned households, the authors control for selection on observables in several ways, including a bias-adjusted matching estimator, a reweighting scheme, and data trimming to remove 20 percent of the sample with the highest and lowest propensity scores. They find that enrollment is 5 to 8 percent higher in conditioned than in unconditioned households. The paper would benefit if these results were translated into a more easily comparable measure, such as net differences in enrollment rates or years of schooling.

Based on the wording of the perceived conditioning—namely, ensuring that children attend school—the program seems to have additional effects on attendance that are impossible to measure using existing data. This aspect should be included in a future follow-up survey, to facilitate the evaluation of other impacts of the program.

Exploring several factors would strengthen the paper's results. First, can the results be generalized? The four regions chosen for the study are in the highlands. Are they representative of the country as a whole? Second, the estimation strategy does not explicitly consider the effects of the precursor to the BDH, called *Bono Solidario*, which was a poorly targeted unconditional cash transfer program. Even though families who received *Bono Solidario* transfers were excluded from the sample, its effects are present. An effort should be made to address this. For example, was the program evenly spread in the regions evaluated? Third, the Colombian experience shows that the targeting instrument (Sisben) can be manipulated. It would be relevant to know whether this is a problem for Selben and whether that poses additional chal-

lenges for the present evaluation. Finally, the wrinkle in the BDH program implementation offers a unique opportunity to explore the importance of costly conditionality. While the presented results are interesting, I am left wondering about the implications for optimal program design. Is the additional impact on schooling worth the cost of having strings attached to the program?

The proliferation of evaluations of cash transfer programs has provided a lot of information on the impact on several outcomes, such as nutrition, child labor, and school enrollment. However, the generated information has not been used in the same measure to adjust program design. This is mainly due to the misalignment of the required changes and politicians' incentives. If academics do not push harder to use the body of results to fine-tune the programs, millions of dollars devoted to impact evaluations will continue to translate into academic publications only, and not into the desired maximum benefits for the poor.

Luis F. López-Calva: Norbert Schady and Maria Caridad Araujo's paper represents an important step forward in understanding the effects of conditional cash transfer programs in Latin America and the behavioral responses of households that receive them. This is not a trivial issue considering that almost 80 million people in Latin America and the Caribbean were beneficiaries of such subsidies in 2007.

The paper uses a randomized study design to analyze the impact of the *Bono de Desarrollo Humano* (BDH), a conditional cash transfer program, on school enrollment among poor children in Ecuador. The authors present two main results, namely, that the BDH program had a large, positive impact on the school enrollment of poor Ecuadorean children and that the program effects are significantly larger among a minority of households that believed the transfers had a school-enrollment requirement. The reason the paper establishes a group of people who "believed" the transfer was conditioned is that the conditionality was not really enforced, though the implementation created the perception among certain households that it would be.

The paper deals with a difficult set of problems that makes traditional impact-evaluation methodologies less appropriate. First, the program instituted a randomized design that was violated in practice, which could potentially affect the validity of the assessment. To address this challenge, the authors wisely exploit an originally random design as an instrument for intervention. The results are quite robust, and the instrument seems appropriate. Thus the data are not really experimental, but there is an initial lottery that can be used as an instrument, highly correlated with treatment. Second, as already mentioned, the program's conditionality was not enforced. Some households,

however, perceived the transfer to be subject to a specific behavior. While this represents a problem for the analysis from a traditional perspective, it opens the possibility of discussing new issues, previously unexplored in conditional cash transfer program evaluations, as explained below.

The econometrics consist mainly of setting up a reduced-form model, then adding controls and the instrument for treatment in a two-stage least squares model. The authors could strengthen the study by controlling for supply-side issues, to expand their exploration of the heterogeneous results among people receiving the transfer. The survey includes access to services, for example, so they may be able to examine the effect of distance to the school. While the fixed effects for the community may already be accounting for that factor, trying specifications in which supply-side characteristics vary across households could be useful, if available. Assessments of these interventions systematically assume that the supply side is homogeneous, but this assumption could obscure important factors in the program's outcome.

An important issue raised in the paper involves the quality of targeting under decentralized selection schemes. Ecuador's centralized design started with a randomized selection, which later was not followed by the operators in the field. One criticism of randomization is that under a limited budget, a program should start by including the poorest. These critics believe that a decentralized decision mechanism based on discretionary selection would best accomplish this goal, since field operators have more information for selecting the poorest among eligible households. For the case of Ecuador, Schady and Araujo compare the socioeconomic characteristics of lottery winners and losers in the original design with those of actual recipients and nonrecipients. They find that randomization would have resulted in a more progressive (or neutral) selection than the discretionary selection by operators.

One caveat that bears mentioning has to do with conditioned versus unconditioned households, in terms of their perceptions. Those beneficiaries whose perceptions are conditioned have obvious incentives to declare enrollment. The paper correctly addresses this concern given the existing information. The authors claim, however, that this problem arises in all databases like this, yet in other cases, like *Oportunidades* in Mexico after 2003, there is an administrative record that allows verification.

The evidence in the paper is generally convincing. The authors satisfactorily solve the methodological challenges, and the effects are economically relevant. They need to extend their evaluations beyond traditional impact-evaluation analysis, however. Their analysis could be used to address deeper questions, where feasible. For example, in the area of child labor, the normative argu-

ments in academic and policy realms can be summarized as a debate over preferences versus constraints. Conditional cash transfers relax the household's budget constraint but impose a condition on the behavioral response. This implies that, for several valid reasons, the desired response may not be socially optimal, or even individually welfare improving, from a standard long-run perspective. In policy circles, the question is whether the conditionality is justifiable, or whether the relaxation of the cash constraint is sufficient to generate the behavioral response the policymakers are trying to induce. Until recently, this question has been addressed empirically. Alvarez, Devoto, and Winters show that conditionality may play a role as an effective screening device, and it becomes a useful tool for policymakers.¹ They also show, however, that supply-side issues (related to health service providers in the case of *Oportunidades* in Mexico) may be a factor for dropouts from the program.

Schady and Araujo find that many so-called unconditioned households increased enrollment (the presumably desired result), while some conditioned households did not. What could explain the differential response? Do households that responded in the desired direction have access to other markets, like credit? Are there supply-side issues that can explain such differences? The impact evaluation literature assumes that supply-side issues, other context-related constraints, and access to other markets are either homogeneous across households or controlled for through appropriate specifications. Experiments like the one analyzed here, featuring a cash transfer and heterogeneous responses presumably as a result of perceptions, may be useful for better understanding the rationale for conditionality or even the need for it in the absence of certain local characteristics. In several countries, opposition to conditional cash transfer schemes has been based on one of two arguments—either a rights-based approach that challenges targeting and conditionality, or the notion that imposing conditions is paternalistic and ignores that households would respond to the transfers in a way that is individually and socially desirable. Evidence like that presented in this paper supports the view that conditionality may be a good idea given that, even when preferences are not an issue, financial constraints are not the only hurdles that beneficiaries must overcome. Even more important, understanding what factors are contributing to the differential response to transfers would help policymakers design more comprehensive interventions to enhance household welfare and achieve socially optimal long-run outcomes.

1. Alvarez, Devoto, and Winters (2008).

References

- Abadie, Alberto, and Guido W. Imbens. 2002. "Simple and Bias-Corrected Matching Estimators for Average Treatment Effects." Technical Working Paper 283. Cambridge, Mass.: National Bureau of Economic Research.
- Alvarez, Carola, Florencia Devoto, and Paul Winters. 2008. "Why Do Beneficiaries Leave the Safety Net in Mexico? A Study of the Effects of Conditionality on Dropouts." *World Development* (forthcoming).
- Angrist, Joshua D. 2004. "Treatment Effect Heterogeneity in Theory and Practice." *Economic Journal* 114(3): C52–C83
- Angrist, Joshua D., Guido W. Imbens, and Don Rubin. 1996. "Identification of Casual Effects Using Instrumental Variables." *Journal of the American Statistical Association* 91(434): 444–55.
- Attanasio, Orazio, Costas Meghir, and Ana Santiago. 2005. "Education Choices in Mexico: Using a Structural Model and a Randomized Experiment to Evaluate Progres." Working Paper EWP05/01. London: Institute for Fiscal Studies.
- Attanasio, Orazio, and others. 2005. "How Effective Are Conditional Cash Transfers? Evidence from Colombia." Briefing Note BN54. London: Institute for Fiscal Studies.
- Behrman, Jere R., Piyali Sengupta, and Petra E. Todd. 2005. "Progressing through Progres: An Impact Assessment of a School Subsidy Experiment in Mexico." *Economic Development and Cultural Change* 54(1): 237–75.
- Bourguignon, Francois, Francisco Ferreira, and Phillippe Leite. 2003. "Conditional Cash Transfers, Schooling, and Child Labor: Micro-Simulating Brazil's *Bolsa Escola* Program." *World Bank Economic Review* 17(2): 229–54.
- Chen, Shaohua, Ren Mu, and Martin Ravallion. 2006. "Are There Lasting Impacts of a Poor-Area Development Program?" Washington: World Bank, Development Research Group.
- Das, Jishnu, Quy-Toan Do, and Berk Özler. 2005. "Reassessing Conditional Cash Transfer Programs." *World Bank Research Observer* 20(1): 57–80.
- De Janvry, Alain, and Elisabeth Sadoulet. 2006. "Making Conditional Cash Transfer Programs More Efficient: Designing for Maximum Effect of the Conditionality." *World Bank Economic Review* 20(1): 1–30.
- Filmer, Deon, and Lant Pritchett. 2001. "Estimating Wealth Effects without Expenditure Data—or Tears: An Application to Educational Enrollments in States of India." *Demography* 38(1): 115–32.
- Filmer, Deon, and Norbert Schady. 2008. "Getting Girls into School: Evidence from a Scholarship Program in Cambodia." *Economic Development and Cultural Change* 56(3): 619–56.
- Glewwe, Paul. 2002. "Schools and Skills in Developing Countries: Education Policies and Socioeconomic Outcomes." *Journal of Economic Literature* 40(2): 436–82.
- Glewwe, Paul, and Pedro Olinto. 2004. "Evaluating the Impact of Conditional Cash Transfers on Schooling: An Experimental Analysis of Honduras' PRAF Program." University of Minnesota.

- Hirano, Keisuke, and Guido W. Imbens. 2002. "Estimation of Causal Effects Using Propensity Score Weighting: An Application to Data on Right Heart Catheterization." *Health Services and Outcomes Research Methodology* 2(3-4): 259-78.
- Hirano, Keisuke, Guido W. Imbens, and Geert Ridder. 2003. "Efficient Estimation of Average Treatment Effects Using the Estimated Propensity Score." *Econometrica* 71(4): 1161-89.
- Hoddinott, John, Emmanuel Skoufias, and Ryan Washburn. 2000. "The Impact of PROGRESA on Consumption: Final Report." Washington: International Food Policy Research Institute.
- Imbens, Guido W. 2004. "Nonparametric Estimation of Average Treatment Effects under Exogeneity: A Review." *Review of Economics and Statistics* 86(1): 4-29.
- Imbens, Guido W., and Joshua D. Angrist. 1994. "Identification and Estimation of Local Average Treatment Effects." *Econometrica* 62(2): 467-75.
- León, Mauricio, Rob Vos, and Wladimir Brborich. 2001. "¿Son efectivos los programas de transferencias monetarias para combatir la pobreza? Evaluación de impacto del *Bono Solidario* en el Ecuador." Quito: Sistema Integrado de Indicadores Sociales del Ecuador.
- León, Mauricio, and Stephen D. Younger. 2007. "Transfer Payments, Mother's Income, and Child Health in Ecuador." *Journal of Development Studies* 43(6): 1126-143.
- Maluccio, John A., and Rafael Flores. 2004. "Impact Evaluation of a Conditional Cash Transfer Program: The Nicaraguan *Red de Protección Social*." FCND Brief 184. Washington: International Food Policy Research Institute.
- McKenzie, David, John Gibson, and Steven Stillman. 2006. "How Important is Selection? Experimental versus Non-Experimental Measures of the Income Gains from Migration." Policy Research Working Paper 3906. Washington: World Bank.
- Ravallion, Martin, and Quentin Wodon. 2000. "Does Child Labor Displace Schooling? Evidence on Behavioral Responses to an Enrollment Subsidy." *Economic Journal* 110(462): C158-C75.
- Schultz, T. Paul. 2004. "School Subsidies for the Poor: Evaluating the Mexican ProgresA Poverty Program." *Journal of Development Economics* 74(1): 199-250.
- Skoufias, Emmanuel. 2005. "ProgresA and Its Impacts on the Welfare of Rural Households in Mexico." Report 139. Washington: International Food Policy Research Institute.
- Todd, Petra E., and Kenneth I. Wolpin. 2006. "Using Experimental Data to Validate a Dynamic Behavioral Model of Child Schooling: Assessing the Impact of a School Subsidy Program in Mexico." *American Economic Review* 96(5): 1384-417.
- Vos, Rob, and Juan Ponce. 2005. "Meeting the Millennium Development Goal in Education: A Cost-Effectiveness Analysis for Ecuador." Working Paper 402. The Hague: Institute of Social Studies.
- World Bank. 2004. *Ecuador: Poverty Assessment*. Washington.