Conditional cash transfers and high school attainment: Evidence from a large-scale program in the Dominican Republic

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Abstract

This paper examines the impact of a large-scale conditional cash transfer (CCT) program on high school attainment in the Dominican Republic between 2005 and 2017. We combine extensive educational, administrative, and household records from program participants across the country and exploit variations in the type (amount) of school transfers received among program participants to estimate the effect of the program. We find that receiving additional transfers for high school education increases the probability of completing high school in around 6.6-8.3 percentage points relative to not receiving these additional transfers. Considering the returns to education attainment, we estimate that for every US 10 additional dollars per year transferred during high school, the recipient is expected to generate (obtain) an additional US 4-5 dollars in her/his annual salary. Several robustness checks support our findings.

Motivation

- CCT programs are widely implemented in developing countries
- In Latin America, roughly one of every four individuals in 17 countries have received cash transfers [1,2]
  - ✓ Making up 20-25% of their household income
- Most of the literature focuses on the short-term effects of CCT programs (for example, see [3, 4, 5])
- Evidence of long-term effects on educational attainment is still scarce
- **Main contributions:**
  - ✓ Examine longer term schooling effects of a large-scale CCT program, Progresando Con Solidaridad (PROSOLI)
  - ✓ Focus on completion of high school considering high desertion rate in Dominican Republic

Program Description

- Figure 1 shows the timeline of PROSOLI and major program components (transfers) linked to nutrition, health and education
- Until 2013, the only cash transfer for school enrollment and attendance was Incentivo a la Asistencia Escolar (ILAE)
  - ✓ All households with children of school age were eligible
- Bono Estudiantil Estudiando Progreso (BEEP) started in June of 2013
  - ✓ Targets children in high school
  - ✓ BEEP transferred between 1.7 and up to 3.3 times more cash relative to ILAE (for a household with one student in high school)
- We focus on receiving ILAE and BEEP transfers (ILAE-BEEP+ group) relative to only receiving ILAE transfers (ILAE+ group)

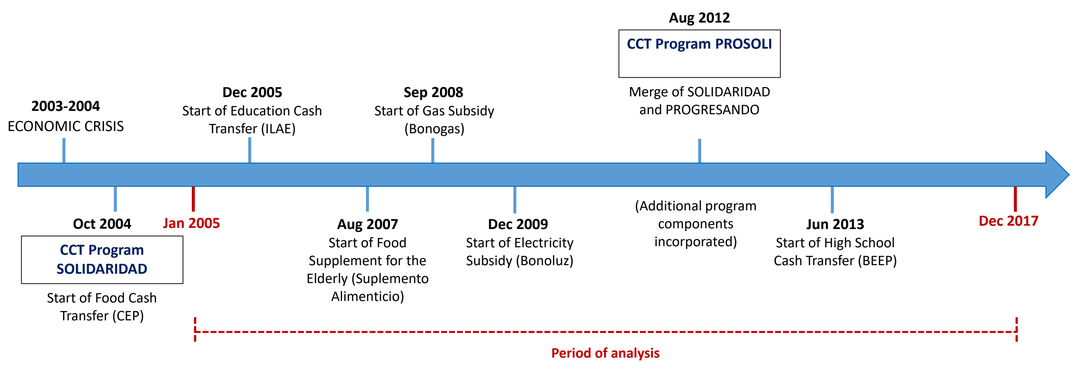

Figure 1. CCT Program Timeline

Data

We developed an algorithm to match students across three extensive administrative databases:

1. Educational records -- National Exams (Pruebas Nacionales or PPNN) of the Ministry of Education
2. History of cash transfers for each recipient household -- Administradora de Subsidios Sociales or ADESS
3. Socio-economic information of beneficiary households -- Sistema Unico de Beneficiarios or SIUBEN

Methods

- Participation in PROSOLI is not random.
  - ✓ It is geographically targeted on poor areas and household eligibility is determined by a proxy means test: Indice de Calidad de Vida (ICV).
- We follow a quasi-experimental approach exploiting variations in the reception of high school transfers among eligible households in targeted areas.
- For estimation of our parameter of interest, the Average Treatment on the Treated (ATT), we use propensity score matching and blocking (subclassification) estimators. We implement both unadjusted and regression adjusted estimators.
- Matching and blocking ensure comparability between the treatment and comparison (control) group.
- Regression adjusted estimators provide additional bias removal and increased accuracy through further adjustment in covariates.
- Figure 2 shows HHs distribution of the propensity score for our two main groups for urban and rural areas:
  - HHs that received ILAE and other transfers (ILAE+) – **Control**
  - HHs that received ILAE, BEEP and other transfers (ILAE-BEEP+) -- **Treated**
- The figure provides evidence of significant overlapping in program eligibility conditions between our two comparison groups at baseline.

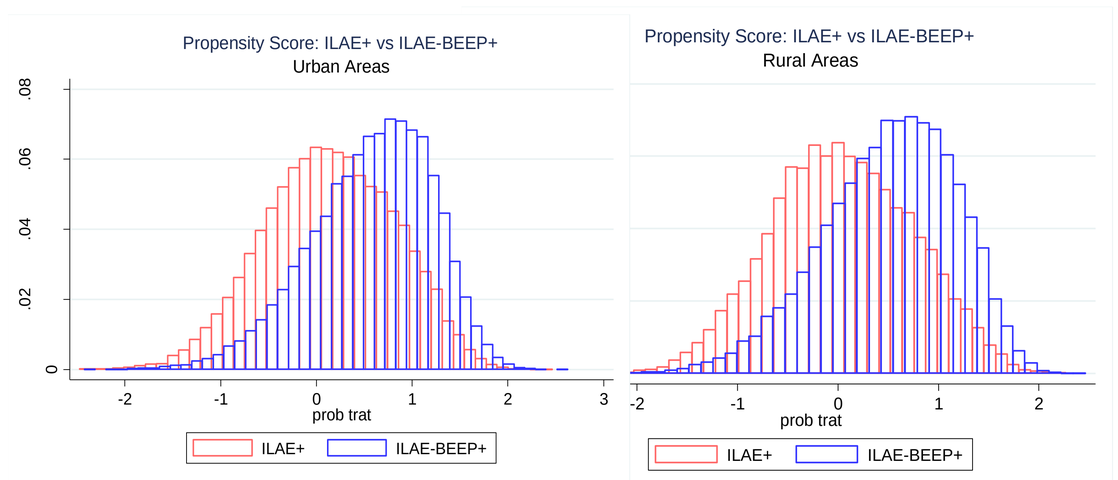

Figure 2. HHs ICV distribution ILAE+ and ILAE-BEEP+

Main Results

- Results indicate that receiving both ILAE and BEEP school transfers increases the probability of high school completion by **7.6-8.3 percentage points in urban areas and by 6.6-7.2 percentage points in rural areas**, compared to exposure to ILAE only.
  - ✓ Implies a relative increase in high school graduation rate of **11.3-14.2%**
- The estimated effects are slightly higher for female students relative to male students.
- **Timing of treatment matters**: Higher effect for those exposed earlier to the program (while still in primary school) – 7.1– 8.8 percentage points –.
- **Other comparison groups:** when compared with less poor conditional recipients not exposed to school transfers, we still find positive and significant effects of exposure to both ILAE and BEEP transfers. However, exposure to ILAE only does not result in increased high school completion rates.
- **Mixed effects on school performance:** No effect on graduation on time, preliminary evidence show mixed results on school performance.
- Main results are robust to standard **robustness checks**.

Conclusions

Estimates indicate economic important effects of school transfers on high school graduation of recipient students of the CCT program, PROSOLI, in the Dominican Republic.

Our results also speak of the importance of tailoring transfers to target groups at risk and that the timing of transfers is also relevant to further expand program impact.

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References

[1] Robles, M., Rubio, M.G. and Stampini, M., 2015. Have Cash Transfers Succeeded in Reaching the Poor in Latin America and the Caribbean, Inter-American Development Bank Policy Brief No. 246, Washington DC.
[2] Ibarraran, P., Medellin, N., Regalia, F. and Stampini, M., 2017. How Conditional Cash Transfers Work: Good Practices after 20 Years of Implementation. Inter-American Development Bank, Washington DC.
[3] Fiszbein, A. and Schady, N., 2009. Conditional Cash Transfers: Reducing Present and Future Poverty. Washington, DC: World Bank.
[4] Baird, S., Ferreira, F.H.G., Ozler, B. and Woolcock, M., 2014. Conditional, Unconditional and Everything in Between: A Systematic Review of the Effects of Cash Transfer Programmes on Schooling Outcomes. Journal of Development Effectiveness 6(1): 1-43.
[5] García, S. and Saavedra, J., 2017. Educational Impacts and Cost-Effectiveness of Conditional Cash Transfer Programs in Developing Countries: A Meta-Analysis. National Bureau of Economic Research, Working Paper No. 23594.