

Education for the Poor

Lasha Lanchava and Zurab Abramishvili, ISET and CERGE-EI

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This brief summarizes the results of a study by Lanchava and Abramishvili (2015), which investigates the impact on university enrollment of an unconditional cash transfer in Georgia, designed to help households living below the subsistence level. The program, introduced in 2005, selects recipients based on a quantitative poverty threshold, which gives us the opportunity to measure the influence on university enrollment with an econometric regression discontinuity design. We use data on program recipients from the Social Service Agency of Georgia (SSA) and university admissions from the National Examination Center (NAEC) to create a single dataset and compare the enrollment rates of applicants who are just above and below the threshold. We find that being a program recipient significantly increases a student's likelihood of university enrollment by as much as 1.4 percentage points (while the sample mean of university enrollment is 12.7%). We also find that the impact is stronger for males and the firstborn children in a family. Our analysis also shows that the effect is equally strong across different locations in the country. Our straightforward policy recommendation is that if a government is trying to increase enrollment in tertiary education, need-based university scholarships may prove to be an appropriate instrument.

Worldwide, cash transfer programs are used to fight poverty. Developing countries typically spend between 1% and 2% of GDP on cash transfers (DFID, 2011). International donors also invest substantially into such programs.

The rationale for cash transfers goes beyond relieving short-run poverty. In their 2011 book *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*, eminent development economists Abhijit Banerjee and Esther Duflo explain the approach as follows: people are poor because of all kinds of detrimental factors, such as family, geography, and just bad luck, yet are unable to get out of poverty because they are trapped. Living barely above the subsistence level, it is very difficult for them to become more productive because most of their scarce resources are spent on food consumption. Unable to invest in skills and education and therefore lacking

professional qualification, the poor remain poor. And, to add insult to injury, so do their children.

If one subscribes to this reasoning, then the availability of financial resources is crucial for getting people out of the vicious cycle of poverty. Yet, this policy position is not uncontroversial. The opposing view is that cash transfers reduce peoples' incentives to solve their own problems, being largely spent on conspicuous consumption (ceremonial activities, movies, television sets and DVD players) instead of education, health, and other long-term investments. Thus, in the end, the effectiveness of such transfer programs depends on what the recipients do with the money. Do they spend it on useless blink or on education and investments in their own skills?

Evidence from around the World – and Georgia

In the academic literature, one can find opposing views on whether an unconditional cash transfer leads to improvements in education outcomes (measured, for example, by scholastic achievements, skills acquired, and academic performance).

Evidence from Ecuador and Nicaragua (Shady and Paxson, 2007) shows that transfer programs have positive effects on the cognitive development of young children. While the analysis relates to preschool child development, thus reflecting improved health care and nutrition, it suggests that parents are willing to spend the additional cash on the future of their children.

Other studies are not as encouraging. De Brauw and Hoddinott (2011) look at conditional cash transfers in Mexico and show that for households that incorrectly understood transfers as unconditional, school enrollment was significantly lower than for the others. In the same vein, Bourguignon, Ferreira and Leite (2013) argue that unconditional transfers have no significant impact on school enrollment.

To contribute to the social policy debate in Georgia, we look at the impact of the Georgian State Social Assistance Program (SSAP) on university enrollment. The program was introduced in 2005 and runs to this day. It provides unconditional cash transfers to people living in extreme poverty. Program recipients are selected by virtue of being below a certain quantitative poverty threshold. We use this threshold to carry out a so-called regression discontinuity analysis, i.e. comparing applicants who are just above to those just below the threshold. These two groups are very similar in their income and other socio-economic parameters and mainly differ in their eligibility for assistance.

Besides assessing the impact of cash transfers on the educational choices of poor families, our analysis contributes to another debate taking place in development economics. Unlike the SSAP program, a government may consider to provide *conditional* cash transfers that have to be expended for activities considered beneficial for the recipients, e.g. education and health. While conditional cash transfers cannot be easily spent on conspicuous consumption, they are associated with higher bureaucratic and administrative costs (Baird, McIntosh and Özler, 2011). Moreover, whether or not conditionality improves outcomes relative to unconditioned transfers is yet to be established conclusively.

Data

In our analysis, we use the Social Service Agency (SSA) dataset on the SSAP beneficiary status of Georgian households between 2005 and 2010. In total, we have over 1.8 million observations taken from about 500,000 families (over 40% of the Georgian population). We match these data with data on entry examinations and scholarship allocations from 2007 to 2013 from the National Examination Center (NAEC).

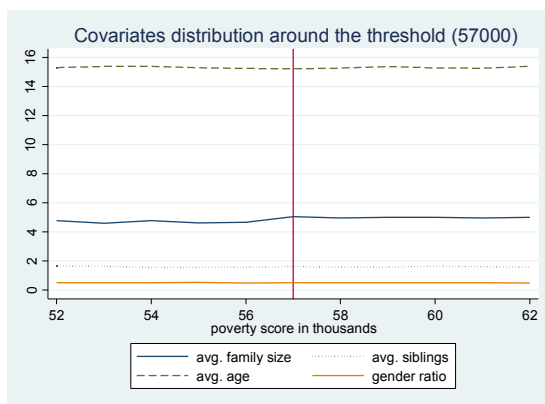
As the initial poverty threshold of 52,000 points (according to a measure of poverty applied by SSA) changed and was raised to 57,000 points in March 2008, the two datasets are considered to ensure that the treatment and control groups are well defined. Dataset 1 contains information on university candidate applicants who come from families assessed after March 2008. We include in the treatment group only families with a treatment period of more than one year. On the other hand, dataset 2 combines applicants from families who were assessed before March 2008.

Methodology and Results

For assessing the causal inference of the social assistance program on university enrollment we chose a parametric regression discontinuity

design (RDD). To carry out the RDD analysis with our datasets, we first go through a visual inspection of characteristics of applicants around the cut-off point. Characteristics such as gender, age and number of siblings are statistically indistinguishable in the 5,000 points and 1,000 points bandwidths around the thresholds for Dataset 1 and Dataset 2, respectively. For Dataset 1, this can be seen in Figure 1.

Figure 1: Distribution of the covariates (Family size, age, number of siblings, gender): Dataset 1



We proceed to use the regression discontinuity analysis to investigate the effects of being in the program on university enrollment, while controlling for other observable characteristics of the applicants. Our main findings, shown in Table 1 below, clearly suggest that being a member of a beneficiary family significantly increases the chance of being enrolled in university by up to 0.8 percentage points (with the sample mean of the university enrollment being 12.7%). Furthermore, it was shown that the effect is stronger for males (possibly reflecting gender-specific preferences – a bias towards males – by parents in the South Caucasian countries) and oldest male-children by 1.7 and 1.5 percentage points, respectively. The latter finding provides support for the quantity-quality tradeoff paradigm formulated by Becker and Lewis (1974).

We perform a similar analysis for dataset 2 and find that the average effect of being a program recipient is 1.4 percent and that estimates are stronger for males (2.3 %) and oldest male children of a family (2.2 %).

Policy Recommendations

Our study provides support for the effectiveness of the SSAP program in reducing poverty, as we find a statistically significant and positive impact of unconditional cash transfers on university enrollment rates. While a 1.4 percentage point increase does not sound like a lot, it is quite significant considering that only 12.7% of children from poor households make it to universities. In essence, we find that SSAP increases university enrollment for the poor by anywhere between 5% (for rural girls) and 20% (for urban boys).

If unconditional transfers have such a strong impact on university enrollment of the poor, the government may consider other, complementary approaches to nudge the poor to invest in skills and education. In particular, one might also go for *conditional* transfer programs, such as need-based university scholarships that would encourage students from poor family backgrounds to continue their education. Such measures would reduce the pressure to leave the educational system and start working early with low education and correspondingly low productivity and income levels.

A recent policy experiment conducted in the village of Dzevri (Livny, 2014) demonstrates that the promise of university scholarships (by a private donor) has tremendous impact on children's motivation to attend classes, study hard, graduate and enroll in universities and professional colleges. In the absence of scholarships, the norm for Dzevri children (girls in particular) was to drop out, marry early, and spend their lives in a small village. All of this changed with the arrival of a private donor, bringing school completion and college enrolment rates from 0 to 100% in just 3 years.

Table 1. The Impact of the Social Assistance Program on University Enrollment: Dataset 1

Enrolled to university (0/1)	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Full sample</i>	<i>Males only</i>	<i>Oldest</i>	<i>Oldest Male</i>	<i>City</i>	<i>City, Males</i>
<i>Program recipient (0/1)</i>	.008** (.004)	.017*** (.006)	.0073 (.006)	.015* (.008)	.011 (.016)	.024 (.021)
<i>Cohort FE</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Entry year into the program FE</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Covariates (HH size, gender)</i>	<i>Yes</i>	---	<i>Yes</i>	---	<i>Yes</i>	<i>Yes</i>
<i>Mean of dependent variable</i>	.127	.115	.126	.115	.125	.129
<i>Observations</i>	61150	31183	38217	19393	6924	3574
<i>R²</i>	0.0021	0.0008	0.0017	0.0010	0.0052	0.0025

Notes: Coefficients in all columns are OLS regression estimates, robust standard errors are in parentheses; ***, **, and * indicate significance at 5%, 10% and 1% level, respectively. Sample 1, 2 and 3 are households (candidate applicants) with the entry examination at least one year later than family assessment period, additionally second sample narrows down on big size families (more than 3 members) and third subsample considers only the capital city of Georgia.

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Lasha Lanchava

International School of Economics at Tbilisi State University (ISET), and CERGE-EI

Lasha.Lanchava@cerge-ei.cz
<http://www.iset.ge>

Lasha Lanchava is a research fellow at the International School of Economics at Tbilisi State University (ISET) Policy Institute and a PhD candidate at the Center for Economic Research and Graduate Education - Economics Institute in Prague. His areas of research expertise cover behavioral and experimental economics. He also exploits and studies natural and quasi-natural experiments to shed light on some important aspects of social policy.

Zurab Abramishvili

CERGE-EI

Zurab.Abramishvili@cerge-ei.cz
<http://www.cerge-ei.cz>

Zurab Abramishvili is a doctoral student and a junior researcher at Center for Economic Research and Graduate Education - Economics Institute (CERGE-EI). He holds BA/MA degrees in Mathematics and a MA in economics from the Tbilisi State University (TSU). His research interests cover economics of education and applied microeconometrics. He is a visiting lecturer at the Masaryk University in Brno and the Charles University in Prague. He teaches courses in Microeconomics and Mathematical Methods in Economics.

