Title: Cash Transfers and Community Scorecards: Experimental Evidence for the Demand for Education in Tanzania

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Abstract:

**Background:** Even while researchers have turned their attention to analyzing the determinants of learning outcomes in schools, in many countries, access to school remains a major policy challenge. A common policy response to address low school participation is to offer financial support through cash transfers or scholarships. However, some have suggested that the effects of demand-side interventions are sensitive to the (perceived) quality of schooling (Pritchett, 2013). If households perceive schools to face severe resource shortages or that children are not making learning gains, they may not make human capital investments even when constraints on costs have been reduced.

**Purpose and Research Question:** This study tests the effectiveness of two interventions designed to alleviate demand-side constraints to schooling investments in Tanzania. It aims to answer the following question: does a community-managed cash transfer improve education outcomes, and does a combined CCT and community scorecard (CSC) intervention, designed to address the quality of service delivery in treatment communities, show evidence of effectiveness?

**Setting and Participants:** The interventions were randomly assigned at the village level within 3 districts (2<sup>nd</sup>-level administrative region) of Tanzania. The evaluation includes household survey data on all beneficiaries and would-be beneficiaries in 40 treatment and 40 comparison villages, and facilities-level data (characteristics and amenities schools and health clinics) in evaluation villages.

**Intervention:** The first intervention comprised a January 2010 conditional cash transfer (CCT) pilot program that was randomly assigned to 40 village councils, with 40 villages as the comparison group. The community-elected councils were responsible for administering payments and enforcing conditions, which for households with eligible children included regular school attendance for children aged 7 to 15 and health clinic visits for children aged 0 to 5. The second was a November 2010-February 2011 village scorecard exercise that was randomly assigned to 20 treatment villages, forming a combined intervention. Program stakeholders and service providers (educators and health clinic staff) participated in this exercise. It involved carrying out an audit of program inputs and sharing information on the quality of service provision, carrying out a series of focus groups in which village residents proposed and then rated a series of indicators related to perceived program and service delivery quality, and identifying the tangible steps necessary to address shortages in specific areas, such as the number of teachers or availability of water.

**Research Design and Data Collection:** The evaluation design included baseline (in January 2010 before treatment), midline (1.5 years after treatment), and endline (2.5 years after treatment) data collections. We evaluate the pilot using a regression specification that exploits random assignment at the village level, and we further control for time-invariant characteristics of individuals and households. We estimate intent-to-treat effects using the following specification:

$$Y_{ihv,t} = \beta_0 + \beta_1(T1_v * M) + \beta_2(T1_v * E) + \beta_3(T2_v * M) + \beta_4(T2_v * E) + \delta_1M + \delta_2E + \sigma_i + \epsilon_{ihv,t}$$

Where T1 is the CCT-only treatment, T2 is the CCT+CSC treatment, M is midline, E is endline,  $\alpha_i$  are individual fixed effects, and epsilon is an individual-level error term indexed by person i in household h and village v, at time t. The primary outcome of interest is school attendance, and we also examine effects on primary school completion, age at initial enrollment and per-child expenditure.

**Results:** We find that the CCT improved school attendance, with primary school-aged children in the combined CCT+ CSC treatment 12.2 percentage points more likely to be attending school 2.5 years later relative to children in control villages, while children in the CCT-only treatment were 7.7 percentage points more likely. We also find the CCT+CSC treatment improved primary school completion by 13.6 percentage points, while the CCT-only treatment improved completion by 16.8 percentage points. We find no effects on age at school entry or on per-child expenditures on schooling. The positive effects on attendance and completion are broadly similar to other experimental evaluations of NGO-supported cash transfer programs in Sub-Saharan African countries (Baird and Ozler, 2011; Akresh et al., 2014), and suggest that community management of CCTs can produce similar results.

To further examine mechanisms by which the CSC mediated the effects of the CCT, we consider supplyside characteristics of schools. We find mixed evidence that the scorecard worked as intended; that is, as an accountability mechanism for beneficiaries to be better equipped to hold government and nongovernment administrators responsible for improvements in service delivery. NGO support to schools in CCT+CSC villages increased substantially relative to schools in other intervention villages, but we find no evidence that the CSC led to changes in the specific areas identified by communities for a course of action, such as improvements in the number of teachers or in infrastructure. Instead, we find evidence that the combined intervention improved school attendance in part through improvements in the perception of school quality. For example, effects on attendance in CCT+CSC villages were driven by villages that increased the score they assigned to assess service delivery quality during the CSC process. The combined intervention also led to increases in the perception of school quality among household heads at midline, relative both to CCT-only and to comparison villages.

**Conclusion:** Our findings provide experimental evidence that community-based interventions focused on the demand for schooling can effectively increase participation. This is likely to be of interest to governments that face significant challenges in administration of social services. Collectively, our research has implications for the design of demand-side schooling interventions in low- and middle-income countries.