Pre-Analysis Plan for "The long-run effects of cash grants to the poor: Experimental evidence from an enterprise development program in Uganda"

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1 Introduction

From 2008 to 2012, Chris Blattman, Nathan Fiala, and Sebastian Martinez worked with the Government of Uganda (GoU), the World Bank, and the research non-profit Innovations for Poverty Action (IPA) to study one of the country's largest development programs: the Youth Opportunities Program (YOP). Under YOP, the government invited groups of roughly 20 underemployment young men and women to submit proposals for grants of roughly $8000, or $400 per person. This was one of the first randomized trials of a cash-based employment program in the world.

YOP turned out to be one of the most effective employment programs on record, at least among the ones with rigorous evidence. Blattman, Fiala, and Martinez (2014) document that most grant recipients invested the cash in skills and materials, started skilled enterprises, and four years later increased their earnings by almost 40%.[1] Meanwhile Blattman, Emeriau, and Fiala provide evidence that beneficiaries increased opposition party membership campaigning., and voting.[2]

This pre-analysis plan is for an nine year follow-up of all of the 2,675 original members of the original YOP study sample.

2 Experimental design

In 2006, the GoU invited groups of young adults, aged roughly 16 to 35, to apply for the YOP program: group cash grants to fund a business proposal for starting individual skilled trades, such as carpentry or tailoring. YOP was oversubscribed, and we worked with the government to randomize funding among screened and eligible proposals. Thousands of groups submitted proposals in 2006 and the government funded hundreds in 2006–7, prior to our study.

In 2007 the central government asked district governments to nominate 2.5 times the number of groups they could fund. The districts submitted roughly 625 proposals to a central government office that reviewed them for completeness and validity. To minimize chances of corruption, the central government also sent out audit teams to visit and verify each group. The government disqualified about 70 applications, mainly for incomplete information or ineligibility (e.g., many group members over age 35, or a group size more than 40). The government also asked that 22 groups of underserved people (Muslims and orphans) be funded automatically.

In January 2008 the government provided us with a list of 535 remaining groups eligible for randomization, along with district budgets. We randomly assigned 265 of the 535 groups (5,460 individuals) to treatment and 270 groups (5,828 individuals) to control, stratified by district.

3 Outcomes

3.1 Primary outcome

Motivated by the theoretical model and results presented in Blattman, Fiala and Martinez (2014) we are primarily interested in the effect of YOP on total earnings. After four years, treated individuals reported 38% higher earnings. In order to see if these effects persist after nine years, we will collect the same three measures of income as in the previous endline and combine them into an additive, standardized index of related outcomes as in Kling et al. (2007):[3]

1. Sum of weekly cash earnings across the 22 occupations. Since earnings are seasonal and do not reflect home production, we also consider two measures of permanent income reported by the household.

2. An index of durable assets—a z-score constructed by taking the first principal component of 70 measures of land, housing quality, and household assets.

3. An index of short-term nondurable consumption—a z-score constructed by taking the first principal component of 30 select food items consumed in the past three days and expenditures on 28 select nonfood items.

[1] C. Blattman, N. Fiala, S. Martinez, Generating skilled self-employment in developing countries: Experimental evidence from Uganda. Quarterly Journal of Economics. 129, 697–752 (2014). See Blattman, Fiala, and Martinez (2014)

[2] C. Blattman, M. Emeriau, N. Fiala, Do anti-poverty programs sway voters? Experimental Evidence from Uganda, Working paper. (2017). See Blattman, Emeriau, and Fiala (2017)

[3] Kling, Jeffrey R., Jeffrey B. Liebman, and Lawrence F. Katz, "Experimental Analysis of Neighborhood Effects," Econometrica, 75 (2007), 83–119.

3.2 Secondary outcomes

We expect that increased earnings (and employment) could have consequences for other aspects of life. These downstream impacts are important but nonetheless secondary outcomes. We are primarily interested in four.

3.2.1 Political behavior

In Blattman, Emeriau and Fiala (2017), we found that treatment was associated with increased levels of opposition support and decreased support for the ruling party in the 2011 elections, three years after treatment. We will test to see if these impacts were still present after in 2016 election behavior. We will focus in particular on an index of measures of opposition party support and electioneering. We have expanded the set of questions from the previous endline to more fully understand the effects on political behavior.

3.2.2 Physical health

The survey includes questions on an individual's ability to perform daily activities such as standing from a sitting position and being able to kneel. We will test to see if treatment is associated with greater physical health, principally as a consequence of higher earnings and employment.

3.2.3 Mental health

We use the same instrument as at baseline (measuring depression, anxiety, distress and hostility symptoms from Blattman and Annan (2010) and Blattman, Green, Jamison and Annan (2016)), and have added four questions from the PHQ-9 scale to get better depression symptoms in a more comparable way to other studies. The four additional questions are:

1. Do you feel lazy/tired or have little energy?
2. Have you lost appetite or feel like you want to eat too much?
3. Do you feel like you are moving or talking so slowly that even other people notice it? Or maybe acting restlessly, making many movements from place to place more than usual?
4. Do you ever think that you would be better off if you died or hurt your self in any way?

We will test impacts on an additive, standardized index of mental health outcomes.

3.2.4 Fertility and youth investment

The survey includes a number of questions about the respondent's fertility and children to test for spillovers onto other household members. We will ask two related questions. First, is there reduced mortality and morbidity among biological children? Second, are there effects on education attainment and enrollment among their biological children? To reduce hypotheses tested we focus on tests of an additive, standardized index of all outcomes.

3.3 Other outcomes

In addition to impacts on the individual and household, we are interested in why earnings increase and what form this new employment takes.

3.3.1 Occupational choice

The intervention was designed to the level and stability of earnings by helping young people engaged in agriculture and petty trade to develop skilled part-time occupations, to add to their mix of existing occupations. Thus one outcome of interest is the hours respondent work and how they distribute their working hours across different occupations. After four years, groups assigned to grants worked 17% more hours and were more than twice as likely to practice a skilled trade. We are interested in understanding if these effects persist 9 years after the program. How many are still working in a trade? Are they more likely to work full time in a trade?

3.3.2 Employment generation for others

Another outcome of interest is to what extent these businesses evolved into firms with employees, measured by the number of full-time equivalent (FTE) employees. The survey collects data on the total number of FTE employees, whether they are family or non-family members, and whether they are paid or not.

3.3.3 Business formalization

Another exploratory outcome is business formation. We would like to understand how legitimate these businesses are, and whether they are registered with the state. For example, we are interested in whether respondents keep logs of business records, are formally registered with regulatory authorities, and pay business taxes. This outcome is of descriptive nature to help us understand the types of businesses people are generating.

4 Estimation strategy

4.1 Intention to treat (ITT) effects

The primary treatment effects of interest are simple intent-to-treat effects. We will follow our empirical strategy at the previous endline and estimate program impacts on outcome Y by calculating the intent-to-treat (ITT) estimate of an offer of a job or entrepreneurship program via OLS:

$$Y_{ij} = \beta_{ITT} T_{ij} + \gamma X_i + \alpha_d + \epsilon_{ij}$$

where Y denotes the outcome for person$i$ in group j; T is an indicator for assignment to treatment; X is the set of baseline covariates; α are district fixed effects (required because the probability of assignment to treatment varies by strata); and ϵ is an individual error term clustered by group. We weight observations by their inverse probability of selection into endline tracking and to correct for attrition. This follows Blattman, Fiala and Martinez (2014) with the exception of the attrition inverse probability weights, which are new.

4.2 Treatment on the Treated (TOT)

We will also follow Blattman et al. (2014) and report TOT estimates of the program impacts for key outcomes using assignment to treatment as an instrument for being treated. This is because 11% of groups assigned to treatment did not receive a grant.

4.3 Heterogeneous treatment effects

As in the previous paper, we plan to examine heterogeneous treatment effects by gender. In the previous paper, we saw that while the earnings of treatment women were clearly diverging from control women whereas the earnings of control men were at least keeping pace with treatment men. We are interested in seeing if these patterns hold after nine years.