

SUPPLEMENTARY WEB APPENDIX: NOT INTENDED FOR PUBLICATION

Appendix A: The Pre-Analysis Plan..... 2

Appendix B: Project and Research Timeline..... 30

Appendix C: Simple Framework of Collective Action and Community Driven Development ... 31

Appendix D: Location of Research Communities 41

Appendix E: Sampling Details..... 42

Appendix F: Treatment versus Control Comparison of All Outcomes in Baseline Data44

Appendix G: Raw Results for All Outcomes46

Appendix H: Summary of Treatment Effect Heterogeneity.....64

NOT INTENDED FOR PUBLICATION

Appendix A: The Pre-Analysis Plan

The following two documents are the original *ex ante* analysis plans for the GoBifo research project. While we adhered strictly to the list of hypotheses and outcomes specified, for presentation purposes we changed the numbering of hypotheses. In the documents that follow, Hypothesis 1 concerning trust is referred to as Hypothesis 7 in the main text. Similarly Hypothesis 2 in the plans concerning collective action is now 4 in the main text, Hypothesis 3 concerning local public goods is now 2, Hypothesis 4 concerning groups and networks is now 8, Hypothesis 5 concerning information is now 9, Hypothesis 6 concerning participation and inclusion is now 5, Hypothesis 7 concerning participation in local governance is now 10, Hypothesis 8 concerning crime and conflict is now 11, Hypothesis 9 concerning systems of authority is now 6, Hypothesis 10 concerning economic welfare is now 3, and Hypothesis 11 concerning social and political attitudes is now 12. Finally, we compiled outcomes from several different hypotheses in the following documents that concern project implementation into a new hypothesis, which we refer to as Hypothesis 1 in the main text.

Community Driven Development in Sierra Leone: GoBifo Analysis Plan

Final version: August 21, 2009

PIs: Rachel Glennerster
Edward Miguel

This document outlines the plan for analyzing the impact of the GoBifo Project, using the endline round 1 data. Note that this document was written up before the analysis of any endline round 1 data. We will produce a similar document before the analysis of any GoBifo endline round 2 data, which has not yet been collected.

Table of Contents:

I. Overview

II. Regression Specifications

III. Hypotheses:

H1: Participation in GoBifo increases trust

H2: Participation in GoBifo increases collective action and contribution to local public goods.

H3: Participation in GoBifo improves the quality of local public services infrastructure.

H4: Participation in GoBifo builds and strengthens community groups and networks.

H5: Participation in GoBifo increases access to information about local governance.

H6: GoBifo increases inclusion and participation in community planning and implementation, especially for poor and vulnerable groups; GoBifo norms spill over into other types of community decisions, making them more inclusive, transparent and accountable.

H7: GoBifo increases public participation in local governance.

H8. By increasing trust, GoBifo reduces crime and conflict in community.

H9: GoBifo changes local systems of authority, including the roles and public perception of traditional leaders (chiefs) versus elected local government. (*Note that this is not an explicit objective of the GoBifo project leadership itself, but it is a plausible research hypothesis.)

H10: Participation in GoBifo improves general economic welfare.

H11: GoBifo changes political and social attitudes, making individuals more liberal towards women, more accepting of other ethnic groups and “strangers”, and less tolerant of corruption and violence. (*Note that this was not part of the original program hypotheses document but relates closely to GoBifo project objectives.)

I. Overview

GoBifo means “go forward” in Krio. The GoBifo Project is a community driven development (CDD) pilot project in Sierra Leone that seeks to build social capital, trust and capacity for collective action in the communities where it works. The project’s designers sought to do this by establishing (or re-establishing) inclusive and representative Village Development Committees (VDCs) in communities and then training them in egalitarian development planning. VDCs were then given grants with which to carry out development projects they had chosen in the planning process.

The evaluation—led by the Evaluations Unit of Institutional Reform and Capacity Building Project (a project of the Government of Sierra Leone and the World Bank), IRCBP, with technical assistance from the U.C. Berkeley Center for Evaluation of Global Action and the MIT

Jameel Poverty Action Lab—is designed to test the ability of a participatory CDD approach to build social capital, promote local public goods provision, and increase the inclusiveness of community decision making in a post-conflict environment where a lack of participatory decision making in local politics was seen by many as a contributor to the country’s long running conflict. If successful, the intention is to seek funding to scale up community level CDD programs and integrate them into one of the large scale community development programs in Sierra Leone.

The evaluation also seeks to develop and refine new participatory tools to identify much sought after, yet hard to measure, development outcomes such as trust and participatory decision making. Moving beyond traditional household survey methods, the endline deploys a series of innovative “gift experiments” designed to measure differences in the extent to which decisions in a community are made in a participatory way, the ability of a community to come together to provide local public goods, and the extent of local elite capture between treatment and comparison groups by observing the communities’ behavior when presented with multiple real-world choices.

The GoBifo project is among the first CDD projects designed to be evaluated by a randomized impact evaluation. In 2005, 118 treatment communities and 118 comparison communities were selected in Bombali and Bonthe districts of the country. A baseline survey (Nov 2005 – Jan 2006) was fielded to capture information on a range of indicators having to do with local public goods, social capital, trust, and capacity for local collective action, as well as certain individual and community characteristics across which the program may have differential impacts, such as socioeconomic status and exposure to violence during the war. After GoBifo completed its work and distributed all (or nearly all) of its grants to communities, an endline survey was fielded (May 2009 – June 2009).

Even before the baseline survey entered the field in 2005, the evaluation team and the project’s designers had developed a set of hypotheses about CDD they sought to test. This document explains each hypothesis and briefly discusses how each will be tested using the baseline and endline data.

II. Regression specifications

II.A. General Framework

The most general strategy for testing each hypothesis will be to regress the measures relevant for each hypothesis on a treatment indicator variable and controls using the following model:

$$Y_{ic} = \beta_0 + \beta_1 T_c + V_c' \Gamma + W_c' \Pi + \varepsilon_{ic}$$

where Y_{ic} is a given outcome (e.g., participation in local road brushing activities) for household i in community c ; T_c is the village treatment dummy; V_c is a vector of the community level controls; W_c is a fixed effect for geographic ward, the administrative level on which the randomization was stratified; and ε_{ic} is the usual idiosyncratic error term, clustered at the village level (the unit of randomization). Here the parameter of interest is β_1 , the average treatment

effect. Note that V_c can either be a sparse set of community level controls such as distance from road, population size, or a more detailed set of controls, including all the variables for which we expect interaction effects, as discussed below in section. The analysis will present specifications with both the sparse and detailed V , as each have their possible strengths, e.g., while both yield unbiased estimates of program impacts, the more saturated specification may benefit from more precise estimates (smaller standard errors).

For all outcomes that were collected in both the baseline and endline surveys, analysis will exploit the panel structure of the data using the following adapted model:

$$Y_{ict} = \beta_0 + \beta_1 T_c + \beta_2 P_t + \beta_3 (T_c \times P_t) + V_c' \Gamma + W_c' \Pi + \varepsilon_{ict}$$

where Y_{ict} is a particular outcome for household i in community c at time t , where $t = 0$ if the observation was recorded before the program began (in the baseline survey) and $t = 1$ if recorded after the program concluded (in the endline survey). The additional indicator variable P signals the post-treatment period. The parameter of interest is now β_3 , the average treatment effect. Since the geographic identifiers are fixed and the community-level controls largely do not change over time, these variables remain as described above and will be drawn from the baseline dataset unless otherwise indicated. Variables for which panel data is available are indicated in the hypotheses section.

There are a couple points to note regarding outcome measures. To start, some outcome measures are at the village level (e.g. the presence of local public goods) in which case Y_{ic} is replaced by Y_c . In addition, while questionnaires were taken at “community” or “household-level,” many of the questions (e.g. those about political and social attitudes) in the household questionnaire were asked specifically about the individual respondent who answered the questionnaire. Within each community, these household respondents were randomly selected according to gender and age status (where youths were defined as 18 to 35 years and non-youths as 35 years and older). Depending on the indicator, and whether it relates to the community, household or individual, the above regression models can be thought of as either regressions using community-, household-, or individual-level data.

The discussion of hypotheses below lists each indicator from the baseline and/or endline surveys that will be used to test each hypothesis. Standard errors in regressions using household level data will be adjusted to account for the fact that treatment is at the village level, by clustering disturbance terms by village. For each hypothesis, Y_{ic} (or Y_c) will be evaluated at least two separate ways:

- 1) regressing a single outcome measure on the dependent variables specified above; and
- 2) “mean effects” estimation, using multiple outcome measures to evaluate if the program has had an impact on a set of closely inter-related outcomes, for instance, the multiple questions dealing with trust, or those measuring information about local governance and politics, or local public service infrastructure, among others (as in Kling et al. 2007).

II.B. Interaction Effects

We are interested in examining whether GoBifo has differential impacts across households and villages with different characteristics, to assess the degree of heterogeneous treatment effects. To this end, we will estimate the following general regression model for each of our hypotheses indicators (as well as using a mean effects approach, as mentioned above):

$$Y_{ic} = \beta_0 + \beta_1 T_c + \beta_2 R_{ic} + \beta_3 (T_c \times R_{ic}) + V_c' \Gamma + W_c' \Pi + \varepsilon_{ic}$$

where R_{ic} is a vector of the individual and village level characteristics listed below across which we hypothesize GoBifo plausibly has differential effects. Similarly, where panel data is available, the interaction model takes the form:

$$Y_{ict} = \beta_0 + \beta_1 T_c + \beta_2 P_t + \beta_3 R_{ic} + \beta_4 (T_c \times P_t) + \beta_5 (T_c \times R_{ic}) + \beta_6 (R_{ic} \times P_t) + \beta_7 (T_c \times P_t \times R_{ic}) + V_c' \Gamma + W_c' \Pi + \varepsilon_{ict}$$

In these models, the parameter of interest (β_3 and β_7 , respectively) provides the differential impact of treatment for different values of the interaction variable (e.g. if R_{ic} is a dummy variable equaling one for females, β_3 gives the additional treatment effect for women as compared to men). Some of the interactions may be particularly important for the hypotheses most closely linked to collective action. All of the variables below might impact the capacity for community collective action, but it is unclear whether those communities with a greater capacity for collective action will see little impact of GoBifo (because there is little room for improvement, for instance), or whether they will see the largest GoBifo impacts because any effects are magnified in communities with more capacity for collective action.

Set 1: Interaction variables explicitly targeted by the GoBifo project

- Gender
 - Benefits of GoBifo may have been larger among women than men, since they were explicitly targeted in the program, with the goal of boosting gender equality. Alternatively, men, whom the baseline confirmed are already more active in community decision making, may have used this influence to capture most program benefits.
- Age (Youths vs. elders)
 - Youth are often marginalized during community decision making processes, but they were explicitly targeted in the program, with the goal of boosting youth empowerment. Thus the effects of GoBifo on feelings of political empowerment and participation will plausibly be larger for youth relative to elders. Alternatively, elders, who are already quite powerful relative to youth in many Sierra Leone communities, may have used this influence to capture most program benefits.
- Household socioeconomic status (e.g., education, asset ownership)
 - Similar to the hypotheses for women and youth, poorer households were targeted by the program for greater voice in local community governance and thus may benefit more than other households. However, their marginalized position may have prevented them from capturing GoBifo benefits relative to other households.

- District (Bombali vs. Bonthe)
 - Randomization was stratified by district, and program effects may plausibly differ across districts due to their different ethno-linguistic, socio-economic and institutional characteristics, issues that we intend explore in detail.
- Indicators of remoteness (e.g. distance to roads).
 - At baseline, remote communities may be poorer, have less information, and less access to government officials and NGOs than less remote communities. They may also be more cohesive with less in and out migration or community members working outside the community. The value of materials communities could purchase with fixed GoBifo grants was less given the very high transport costs incurred in bringing the materials to the communities (a concern raised by GoBifo staff). For these reasons we might expect differential program impacts in more remote areas.
- Community size
 - In our discussions with GoBifo field staff, many indicate that they believe smaller population villages are often better able to adopt the GoBifo model to achieve local collective action than larger population villages, an issue we can test explicitly in the data. The classic work of Mancur Olson (1961) and many public economics authors on local collective and public good free-riders would predict this same pattern.

Set 2: Other interaction variables of interest

- War exposure

Violence and trauma experienced during the recent conflict has affected levels of trust in communities and collective action. War-related displacement and the introduction of strangers into communities also have impacts. Destruction of infrastructure during the war reduced the stock of community resources and may influence community choices under GoBifo. We will estimate heterogeneous treatment effects of GoBifo, namely, whether a community driven development project can mitigate any negative conflict effects, and magnify any positive conflict legacies, by testing for interaction effects between treatment variables and measures of war and violence exposure. Two different hypotheses suggest that impacts could either be more or less pronounced in war exposed communities, and we will test both.

This will entail examining the outcome measures for in the above 11 hypotheses (H1-H11) while testing for significant interaction effects between the program treatment indicator with indices of war and violence exposure similar to those used in Bellows and Miguel (2008). The direction of these effects could go either way:

 - A widely heard argument about war exposure advances that collective action capacity and trust will be lower in communities more exposed to violence during the war. (The relevant variables are found in the HH, Village and Gift modules, as listed above.)
 - The findings of Bellows and Miguel (2008) and Blattman (2008) suggest the opposite, namely that communities exposed to violence during the Sierra Leone war and the Ugandan war, respectively, may actually have more trust and capacity for collective action. (The relevant variables are found in the HH, Village and Gift modules, as listed above.)

- Ethno-linguistic fractionalization
 - Collective action is plausibly more difficult to achieve in diverse communities (Easterly and Levine, 1997), and may also be more difficult where there are a higher concentration of “strangers” (those born outside the community).
- Measures of chiefly authority
 - Collective action and free rider problems are plausibly more easily overcome with strong chiefs who can encourage household contributions.
- Fraction of individuals whose ancestors were slaves
 - At the household level, slave descent is arguably an indicator of socio-economic marginalization. At the village level, divisions and resentments between formerly slaves and former slave-owning families may make collective action more difficult. Cross-country research (Nunn 2008) finds that countries with slave histories have worse institutional and economic performance.

III. Hypotheses

For each hypothesis, the following section lists the specific indicators to be analyzed (separately and as a group using mean effects) and whether panel data or only endline data is available for that indicator. For some hypotheses, this section identifies a primary set of indicators that most directly relate to and are most likely to be impacted by the project, and also lists a more speculative secondary set that tie less directly to program objectives to be tested separately. Note also that several indicators below are conditional—for example, measuring contributions to a public good given the fact that the public good exists in the community—and thus may apply to only a small sub-sample of observations. As the reduction in sample size decreases statistical precision, and in some cases may fall below the minimum size necessary to detect statistically significant effects, the mean effects analysis will be run with and without these conditional indicators as appropriate. Such small sample constraints will also be considered when interpreting the effects of conditional indicators on their own in the single outcome regression specifications. These concerns about conditionality and sample size apply to all indicators below whose description begins with the word “given.”

H1: Participation in GoBifo increases trust.

Household Level outcomes (all panel data):

- Stated respondent “trust” in other individuals (believe in them or have to be careful), and specific groups of individuals, such as community members, people from other villages, chieftom officials, police, local councilors, central government officials, NGO/donor projects, is higher in GoBifo treatment villages (HH module, G5A through G5G).
- Treatment households are more likely to be a member of at least one osusu (savings group) (HH module, F1A and F1B)
- Hypothetically, if someone in the household left his or her wallet at a community meeting, he or she believes it will be there upon return (HH module, G1).
- In reality, if someone in the household has left his or her wallet at a community meeting and returned to find it (HH module, G2).

- Hypothetically, if someone in the household could not travel to market, he or she would entrust a community member to buy it for them (HH module, G3).
- In reality, someone in the household was not able to travel to market and entrusted a community member to buy it for them (HH module, G4).

(Testing this and other hypotheses also includes identifying interaction effects, as discussed in section IIB above.)

H2: Participation in GoBifo increases collective action and contribution to public goods.

Household Level outcomes (all panel data save the last two concerning the gift experiment):

- Among farming households, households in treatment villages are more likely to work on communal farms (HH module, D12).
- Given that households work on a communal farm, treatment households do so more frequently (HH module, D12A).
- Treatment households are more likely to brush (clean) the road in their communities (HH module, F11).
- Treatment households are more likely to give money to local school associations (PTA, CTA, SMC) (HH module, F3G).
- Treatment households are more likely to contribute labor to local school associations (PTA, CTA, SMC) (HH module, F3H).
- In treatment communities, households think the community will be able to raise more funds for the vouchers (HH module, E13)
- In treatment communities, households report that they themselves will contribute more to the building materials vouchers (HH module, E14)
- Given membership in each of the following groups—osusu (savings group), labor sharing gang, school PTA, social club, religious group, savings for events, traditional society—treatment households are more likely to contribute financially and with their own labor (HH module, F1-7g and F1-7h)

Community Level outcomes:

Primary (all panel save the first two regarding the voucher experiment)

- Treated communities are more likely to redeem the building materials vouchers (Gift experiment)
- Given that the community redeemed any building materials vouchers, treated communities will raise and spend more funds in the store (Gift experiment)
- Treated villages are more likely to have had a VDC since 2006 than control communities (Village module, G17).
- Treatment communities are more likely to have taken a project proposal to an external funder (Village module, H9).
- Treatment communities are more likely to have communal farms (Village module, F1).
- Treatment communities are more likely to have a community teacher (Village module, E1).
- Given that the community has a community teacher, treatment communities are more likely to have him trained (Village module, E2).

- Given that the community has a community teacher, treatment communities are more likely to provide incentives in food, cash, or providing work in their farm (Village module, E3A, E3B, E3C).
- Given that the community provides incentives to the community teacher in cash, the amount provided in treatment communities is higher (Village module, E3B1).
- Given that a particular asset exists in the community, for each public asset treated communities are more likely to have provided some of their own funds for its construction (Village C1d-C16d)

Secondary (all panel save the last four indicators regarding maintenance)

- Given that the community has a community teacher, if someone in the community was supposed to contribute and didn't, treatment communities are more likely to take collective action to convince him/her (Village module, E7A through D).
- Given the presence of a primary school in the community, treatment communities are more likely to have formal maintenance plans for local primary schools than controls (Village module, D1 Da).
- Given the presence of a latrine in the community, treatment communities are more likely to have formal maintenance plans for local latrines than controls (Village module, D2 Da).
- Given the presence of a drying floor in the community, treatment communities are more likely to have formal maintenance plans for the drying floor than controls (Village module, D3 Da).
- Given the presence of at least one water well in the community, treatment communities are more likely to have formal maintenance plans for local water wells than controls (Village module, D4).

H3: Participation in GoBifo improves the quality and quantity of local public services infrastructure.

Community Level outcomes:

Primary (all panel data)

- Treatment communities have more/higher quality primary schools than controls (Village module, C1B and C1C; K10A through K10D).
- Given that the community has a primary school, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C1D)
- Treatment communities have more/higher quality public health units (community health centers, community health posts, maternal & child health post) than controls (Village module, C3B, C3C, C3AB).
- Given that the community has a public health units (community health centers, community health posts, maternal & child health post), a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C3D)
- Treatment communities have more/higher quality water wells (manual or mechanical wells) than controls (Village module, C4B, C4AB, C4BB; K13A through K13D).

- Given that the community has a well, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C4AC, C4BC).
- Treatment communities have more/higher quality drying floors than controls (Village module, C7B and C7C).
- Given that the community has drying floors, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C7D).
- Treatment communities have more/higher quality communal grain stores than controls (Village module, C8B and C8C; K12A through K12D).
- Given that the community has drying floors, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C8D).
- Treatment communities have more/higher quality community centers than controls (Village module, C10B and C10C).
- Given that the community has community centers, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C10D).
- Treatment communities have more/higher quality palava huts than controls (Village module, C11B and C11C).
- Given that the community has palava huts, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C11D).
- Treatment communities have more/higher quality court barriers than controls (Village module, C12B and C12C).
- Given that the community has court barriers, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C12D).
- Treatment communities have more/higher quality markets (Village module, C14B and C14C; K11A through K11D).
- Given that the community has markets, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C14D).
- Treatment communities have more/higher quality latrines than controls (Village module, C15B and C15C).
- Given that the community has latrines, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C15D).
- Treatment communities are more likely to recently have taken a development project to an external funder (Village module, H9).

Secondary (all panel save the last five regarding maintenance)

- Treatment communities have more/higher quality secondary schools than controls (Village module, C2B and C2C).
- Given that the community has a secondary school, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C1D)
- Treatment communities have more/higher quality mosques/churches than controls (Village module, C5B, C5C, C6B, C6C).

- Given that the community has a mosque/church, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C5D, C5D).
- Treatment communities have more/higher quality children's centers than controls (Village module, C9B and C9C).
- Given that the community has children's centers, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C9D).
- Treatment communities have more/higher quality cassava greater/garri processors than controls (Village module, C13B and C13C).
- Given that the community has cassava greater/garri procesors, a higher share of treatment communities provide community funds to it (completely or partially) (Village module, C13D).
- Given the presence of a primary school in the community, treatment communities are more likely to have formal maintenance plans for local primary schools than controls (Village module, D1 Da).
- Given the presence of a latrine in the community, treatment communities are more likely to have formal maintenance plans for local latrines than controls (Village module, D2 Da).
- Given the presence of a drying floor in the community, treatment communities are more likely to have formal maintenance plans for the drying floor than controls (Village module, D3 Da).
- Given the presence of at least one water well in the community, treatment communities are more likely to have formal maintenance plans for local water wells than controls (Village module, D4).
- Given that the community has recently implemented at least one development project, treatment communities are more likely to have formal maintenance plans for them (Village module, H2 through H8, part f).

H4: Participation in GoBifo builds and strengthens community groups and networks.

Household Level outcomes (first 9 indicators are panel data, remaining 7 appear in endline only):

- Treatment households are more likely to have attended to church/mosque in the last month (HH module, F9)
- Treated households are likely to offer higher cash contributions to the church/mosque (HH module, F10).
- Given that they needed to re-thatch their roof, treatment households are more likely to have received help from other members of the community (HH module, F12A).
- Treatment households are more likely to have helped neighbor re-thatch roof (HH module, F13).
- Treatment households are more likely to be a member of at least one osusu (savings group) (HH module, F1A and F1B).
- Given membership in osusus (savings groups), treatment households are more likely to have attended a meeting in past four weeks, contribute more to them (financially and with labor) (HH module, F1F, F1G, F1H).

- Treatment households are more likely to be a member of at least one school PTA/CTA or SMC (HH module, F2A and F2B).
- Given membership in a school PTA/CTA or SMC, treatment households are more likely to have attended a meeting in past four weeks, contribute more to them (financially and with labor) (HH module, F3F, F3G, F3H).
- Treatment households are more likely to be a member of at least one social club (sports, dances, activities) (HH module, F4A and F4B).
- Given membership in a social club (sports, dances, activities), treatment households are more likely to have attended a meeting in past four weeks, contribute more to them (financially and with labor) (HH module, F4F, F4G, F4H).
- Treatment households are more likely to be a member of a religious group (not only attending to church/mosque) (HH module, F5A and F5B).
- Given membership in a religious group (not only attending to church/mosque), treatment households are more likely to have attended a meeting in past four weeks, contribute more to them (financially and with labor) (HH module, F5F, F5G, F5H).
- Treatment households are more likely to be a member of group savings for major events (weddings, funerals) (HH module, F6A and F4B).
- Given membership in group savings for major events (weddings, funerals), treatment households are more likely to have attended a meeting in past four weeks, contribute more to them (financially and with labor) (HH module, F6F, F6G, F6H).
- Treatment households are more likely to be a member of a traditional society (HH module, F7A and F7B).
- Given membership in a traditional society, treatment households are more likely to have attended a meeting in past four weeks, contribute more to them (financially and with labor) (HH module, F7F, F7G, F7H).

H5: Participation in GoBifo increases access to information about local governance.

Household Level outcomes (all panel data save the first two regarding the gift choice):

- Households in treatment communities are more likely to attend meetings to discuss the gift choice (HH module, E1).
- In treatment communities, a higher proportion of households know what were the two gift options (E2) and a higher proportion knows which gift was chosen (E3) (HH module).
- Treatment households more likely to correctly name their Local Councilor (HH module, I1).
- Treatment households more likely to correctly name their Local Council chairperson (HH module, I2).
- Treatment households more likely to correctly name their Section Chief than controls (HH module, I3).
- Treatment households more likely to correctly name their Paramount Chief (HH module, I4).
- Treatment households more likely to know when the next general elections are going to be held (HH module, I5).

- Treatment households more likely to correctly identify the amount adults are supposed to pay in local tax (5000 or 2000 Leones, depending on the situation) (HH module, I6).
- Treatment more likely to know who spends market dues (chief or local council) (HH module, I7A).
- Treatment households more likely to know about local council projects than controls (HH module, I8).
- Treatment households more likely to obtain information on politics through alternative channels (i.e., radio), rather than relying on local authorities (chief/village headman, Local Council/WDC, other community leaders) for information (HH module, 9).

Community Level outcomes (all panel save the last one regarding Paramount Chief visits):

- Treatment communities more likely to publicly display awareness campaign posters, financial information, development plans, minutes from a meeting, government policies, rights, etc., or election/voting information (Village module, K5A through K5F).
- Treatment communities more likely to get visits from Ward Development Committee members (Village module, G7).
- Treatment communities more likely to get visits from Local Council member (Village module, G8).
- Treatment communities more likely to get visits from the Paramount Chief (Village module, G10).

As GoBifo explicitly sought to improve linkages with the Local Councils, a sub-hypothesis relating to this is that knowledge about Local Councils increased even if other information about governance did not increase. We will therefore also run the above with only the indicators related to Local Councils and Ward Development Committees.

H6: GoBifo increases inclusion and participation in local planning and implementation, especially for poor and vulnerable groups; GoBifo norms spill over into other types of community decisions, making them more inclusive, transparent and accountable

Household Level outcomes (first 3 endline only, others panel):

- Treatment households more likely to have attended the community meeting to decide what gift to choose (HH module, E1).
- In treatment communities, a higher proportion of women and youth respondents report attending the community meeting to decide what gift to choose (HH module, E1).
- Given attendance at the meeting to decide on the gift, treatment households more likely to speak publicly (HH module, E6).
- In a hypothetical situation, more treated households agree that if someone from outside comes to the community and wants to do a project, the best thing to do is to take a democratic decision (discuss as a community, or have a vote), rather than allow the village authorities to decide (HH module, K13).

- Given membership in each of the following groups—osusu (savings group), labor sharing gang, school PTA, social club, religious group, savings for events, traditional society—treatment households are more likely to have attended a meeting in past four weeks (HH module, F1-7f).
- Treatment households more likely to attend community meetings (HH module, H1).
- Given meeting attendance, treatment households more likely to make speeches, comments, or suggestions (HH module, H1B).
- Given that the community has community teachers, treatment households are more likely to go to meetings to decide what to give to the teachers as payment (HH module, H2A2).
- Given attendance at community teacher meetings, treatment households are more likely to make speeches, comments, or suggestions (HH module, H2AI).
- Given membership in a communal farm, treatment households are more likely to attend a meeting to decide what to plant (HH module, D12b).
- Given attendance at communal farm meeting, treatment households more likely to make comments (HH module, D12bi).

For the next 4 primary indicators, we expect that GoBifo will influence communities to take decisions in a more democratic fashion and for respondents to report that this is so; however, we acknowledge that GoBifo might make participants more aware of authority and thus more likely to express criticism of perceived inequities in voice (all endline only).

- Treatment households more likely to describe how the gift decision was made as more democratic (HH module, E7).
- Treatment household more likely to report that everyone had equal say in the gift decision (HH module, E8).
- Treatment household more likely to report that everyone will have equal say in how to use the tarp (HH module, E10).
- In a hypothetical situation, treatment households are more likely to agree that if the big ones in the community wanted salt and everyone else batteries, they will choose the latter (HH module, E5).

Community level outcomes:

Primary outcomes (all indicators endline only)

- Treated communities have higher participation in meetings to determine the allocation and use of village resources, relative to control communities (Gift module, A1/5, B1/7, C1/5).
- Members of treatment communities participate more actively in the gift choice (Gift module, S1, D1)
- More women and youth in treatment communities attend to community meetings to determine the allocation and use of village resources, relative to control communities (Gift module, A1/5, B1/7, C1/5).
- Women and youth in treatment communities are more active in community meetings held to determine the allocation and use of village resources, relative to control communities (Gift module, D1A and D1B, S1A and S1B).
- Decisions about the allocation and use of village resources is more likely to include a vote in treatment communities (Gift module, question S12 and S7D).

- The deliberation is likely to be more inclusive in treatment communities: more public debate (S7A), less public discussion among opinion leaders (S7B) (Gift module).
- In treatment communities, the decision about the gift was done in a more democratic way, with 1 being the least democratic, and 5 being the more democratic (Gift module, S8, D3, A6, B8, C6).
- In treatment communities, it is less likely to have a group leave the meeting to discuss separately (“hanging heads”) (Gift module, S7C and S11)
- In treatment communities, given that there was a hanging heads, the “hanging head” group is more inclusive (Gift module, S11A, with 1 being less inclusive and 3 more inclusive, drop 4; higher proportion of women and youth included A2-4, B3-5, C2-4).
- In treatment communities, it is more likely to have women play a relatively more important role, compare to men (Gift module, S28, A7, D5, 5 being better).
- In treatment communities, it is more likely to have youth play a relatively more important role, compare to non-youth (Gift module, S29, C7, D6, 5 being better).
- Treatment communities are expected to have longer meetings (Gift module, B2/B6)
- In treatment communities, gift choice is more likely to reflect the view of the majority of household respondents (Gift S2 and HH module C8)

Secondary outcomes (all indicators endline only save the last few regarding community teachers, communal farms and presence of a VDC, which are panel)

- In treatment communities, people are more likely to take minutes during the meeting (Gift module, S9).
- In treatment communities, it is more likely to have facilitation (Gift module, S10).
- Given that there is a facilitator, it is less likely to be a traditional authority, and/or more likely to be a woman or a youth in treatment communities (S10D).
- In treatment communities, non-traditional leader, or youth or woman is more likely to announce the final decision of the meeting in treatment communities (Gift module, S13).
- In treatment communities, non-traditional leader, or youth or woman is more likely to accept the cards in treatment communities (Gift module, S14).
- In treatment communities, it is more likely that opinions were publicly expressed (Gift module, S15).
- In treatment communities, more different opinions were expressed (Gift module, a higher proportion of S15A through S15D is YES).
- In treatment communities, at least one woman is more likely to publicly express her opinion in the meeting (Gift module, S15F).
- In treatment communities, at least one youth is more likely to publicly express his/her opinion in the meeting (Gift module, S15G).
- In treatment communities, more of the public discussion is dedicated to a logical argument (Gift module, S17, 5 being better).
- In treatment communities, more of the public discussion is dedicated to how the gift will be distributed (Gift module, S18, 5 being better).
- In treatment communities, more of the public discussion on how the tarpaulin will be used (Gift module, S19, 5 being higher).

- In treatment communities, there is more discussion of how to raise money for the cards (Gift module, S20, 5 being better).
- In treatment communities, it is more likely to have mentioned the VDC during the discussion (Gift module, S21).
- In treatment communities, it is more likely that village authorities actively reach out to women during the meeting (Gift module, S22).
- In treatment communities, it is more likely that village authorities actively reach out to youth during the meeting (Gift module, S23).
- In treatment communities, the discussion is likely to be less concentrated (Gift module, S24, 4 being less concentrated).
- In treatment communities, participants were more likely to appear more satisfied with the outcome of the deliberation (Gift module, S27).
- No expectation on whether treatment communities would choose salt or batteries.
- Treatment communities held a community meeting more recently (Village module, G15)
- Given that they held a meeting, treatment communities more likely to record minutes (Village module, G15C).
- Treatment communities more likely to have a VDC since 2006 (Village module, G17)
- Given presence of a VDC, treatment communities have a higher proportion of women and youth members (Village module, G18)
- Given that the community has community teachers, treatment communities more likely to have a meeting to decide how much to pay them (Village module, E4).
- Given that the community has community teachers, treatment communities more likely to report that everyone had equal say in deciding how much to pay them (Village module, E4).
- Given that the community has communal farm, treatment communities more likely to have a meeting to decide what to plant (Village module, F2i).
- Given that the community has communal farm, treatment communities more likely to keep paper records about farm proceeds (Village module, F2l).

H7: GoBifo increases public participation in local governance and politics

Household level outcomes (first 7 panel, last 4 endline only):

- Treatment households are more likely to have voted in the last general Presidential election (2007) (HH module, J2 and J3, verify with punch J5 and J6).
- Treatment households are more likely to have voted in the last local government elections (2008) (HH module, J4, verify with punch J7).
- Treatment households more likely to have attended a local council meeting or had direct contact with the local councilor (HH module, J16).
- Treatment households more likely to have attended a WDC meeting or had direct contact with a WDC member (HH module, J20).
- Treatment households more likely to believe they can change an unjust local council policy (HH module, J8).
- Treatment households more likely to think they can change an unjust chiefdom policy (HH module, J9).

- If not a member, treatment respondents are more likely to want to become a member of the VDC (HH module, J1a).
- Treated households are more likely to discuss politics with someone of the community more often (HH module, K11, 1 more often, 5 never).
- Treatment households more likely to agree that the local council listens to what people say or need (HH module, J17).

Community level outcomes (all panel save the last indicator):

- Treatment communities are more likely to have someone standing in the Paramount chief elections than control communities (Village module, G3).
- Treatment communities are more likely to have someone standing in the Section chief elections than control communities (Village module, G4).
- Treatment communities are more likely to have someone who contested the party symbol than control communities (Village module, G5).
- Treatment communities are more likely to have someone running for the Ward development committee than control communities (Village module, G6).
- Treatment communities more likely to have a VDC since 2006 (Village module, G17)
- Given presence of a VDC, treatment communities have a higher proportion of women and youth members (Village module, G18)

H8. By increasing trust, GoBifo reduces crime and conflict in community

Household level outcomes (first 3 endline only, last 4 panel):

- Households in treatment communities are more likely to agree that the use of violence is never justified in politics (HH module, K1).
- Households in treatment communities are more likely to agree that husbands don't have the right to beat their wives (HH module, K3).
- Households in treatment communities are less likely to agree that in order to raise a child properly, you have to beat him/her (HH module, K7).
- Households in treatment villages have less reported personal conflicts over loans or other money issues (HH module, L1).
- Given that the household had a problem over a money business, treatment households are less likely to be engaged in personal violence or fighting (HH module, L1C).
- Treatment households experience less theft of household items, money or livestock (HH module, L4 through L7).
- Treatment households experience fewer witchcraft crimes (HH module, L8).

H9: GoBifo changes local systems of authority, including roles and public perception of traditional versus local government

Household level outcomes (first 7 endline only, last 3 panel):

- Members of traditional authority (chiefly) households in treatment communities have less influence in community decision-making, in particular, in the Gift module choice between salt and batteries, and in how the tarpaulin gift is to be used (HH module, E7, E8, E10).

- In treatment communities, it is more likely that households agree that the tarpaulin should be stored in a public space (HH module, E12 options 2, 3, or 4).
- Given that the tarpaulin was stored in a private residence, it is more likely that it was not stored in the residence of a traditional authority (HH module, E12A).
- Treatment community respondents are more likely to agree that citizens should question the actions of leaders, rather than having more respect for authorities (HH module, K2)
- Treatment community respondents are more likely to agree that responsible women or youth can be good leaders and should be encouraged to stand in elections (HH module, K5).
- In a hypothetical situation, more treated households agree that if someone from outside comes to the community and wants to do a project, the best thing to do is to take a democratic decision (discuss as a community, or have a vote), rather than allow the village authorities to decide (HH module, K13).
- Treatment households are less likely to resolve disputes/conflict through traditional authorities (HH module, L2A through L2J).

For the next two primary indicators, note that GoBifo did not aim to diminish the influence of traditional authorities and thus these are research questions only and not explicit program objectives (see note on page 1).

- In treated communities, relative to control, households are more likely to have a higher level of trust and confidence in Local Councils as compared to traditional chiefdom authorities (G5e vs. G5c, J12 vs. J17)
- In treated communities, households have feel that Local Council officials listen to them more as compared to traditional chiefdom authorities (J13 vs. J18)

Secondary (panel)

- Given that the respondent had a conflict with someone over a loan or other money business, treatment households are less likely to resolve it through traditional authorities (HH module, L1B).

Community level outcomes:

- Given that the community has a community teacher, in treatment communities the most influential person in the decision on how much to pay him/her was not one of a traditional authority (Village module, E5).
- Given that the community has a community teacher, if someone was supposed to contribute and didn't, in treatment communities it is less likely that they report him to the chief (Village module, E7C and E7D).
- In treatment communities the chief and local elders do not make decisions about the allocation and use of village resources without taking into account input from other community members (Gift module).
- Treatment communities are more likely to take a vote on decisions regarding the allocation and use of village resources (Gift module).
- In treatment communities, it is less likely that the chief or elders decide about the gift without consulting the rest of the population (Gift module, A6, B8 ,C6, D3).

H10: Participation in GoBifo improves general economic welfare

Household Level outcomes (first 3 include a mix of panel and endline indicators, last 4 are endline only):

- Proxies for household income – assets measures (based on principal components analysis) and estimated household consumption – are higher for treatment households (HH module, C7 through C14).
- Treatment households move into higher economic quintiles relative to entire sample of treatment and control villages (HH module, C7 through C14).
- Treatment households have more diverse sources of income (D1-D3, section A).
- Treatment households generate more income (D1-D3, section b).
- A higher proportion of households market their agricultural production (D7 through D11B).
- Given that they market their agricultural goods, treatment communities have higher revenue (D7 through D11C).
- Children in treatment households spend more days in school in the last week than children in control households (HH module, C17 through C23).

Community Level outcomes (both panel):

- Treatment communities are more likely to have petty merchants selling packaged goods (cigarettes, crackers, etc) than control communities (Village module, K6).
- Treatment communities are more likely to appear better off than other communities visited in their area (Village, K14)

H11: GoBifo changes political and social attitudes, making individuals more liberal towards women, more accepting of other ethnicities and “strangers”, and less tolerant of corruption and violence.

Household Level outcomes (first two panel, rest endline only):

- Given membership in osusus (savings groups), treatment households are more likely to participate in co-ed groups, groups in which youth and non-youth are together, and/or groups in which members of other tribes also participate (HH module, F1B, F1C and F1D).
- Given membership in labor sharing gangs, treatment households are more likely to participate in co-ed gangs, labor gangs in which youth and non-youth are together, and/or labor gangs in which members of other tribes also participate (HH module, F2B, F2C and F2D).
- Given membership in social clubs (sports, dances, activities), treatment households are more likely to participate in co-ed associations, associations in which youth and non-youth are together, and/or associations in which members from other tribes also participate (HH module, F4B, F4C and F4D).
- Given membership in religious groups (not just going to church/mosque), treatment households are more likely to participate in co-ed associations, associations in which youth and non-youth are together, and/or associations in which members from other tribes also participate (HH module, F5B, F5C and F5D).

- Given membership in group savings for major events (weddings funerals, etc), treatment households are more likely to participate in co-ed associations, associations in which youth and non-youth are together, and/or associations in which members from other tribes also participate (HH module, F6B, F6C and F6D).
- Given membership in traditional societies, treatment households are more likely to participate in associations in which youth and non-youth are together, and/or associations in which members from other tribes also participate (HH module, F7B, F7C and F7D).
- Treatment households are more likely to report that it is not right to abuse one's wife (HH module, K3).
- Treatment households are more likely to agree that responsible young people can be good local leaders (HH module, K4).
- In treatment communities, household members are more likely to agree that women can be good politicians, and they should be encouraged to stand in elections (HH module, K5).
- Treatment individuals express less tolerance of violence and corruption (HH module, K6).
- Treatment households are more likely to agree that responsible people can be good leaders, even if they are not originally from their community (HH module, K8). In treatment communities, household members are less likely to agree that local leaders have the right to force people to work for the community (HH module, K9)
- In treatment communities, household members are more likely to agree that local leaders treat youth with respect (HH module, K10).

Community Level Outcomes:

- Given that the community has a community farm, youth, women and members of other villages are more likely to work in the farm, whereas children are less likely to work on them (Village module, F2A, F2B, F2C, F2D).

Community Driven Development in Sierra Leone: Supplementary Indicators

February 19, 2010

PIs: Rachel Glennerster
Edward Miguel

This document provides additional indicators that will be assessed as part of the GoBifo Project impact evaluation using the endline round 2 data. Note that this document was written up before the analysis of any endline round 2 data. For details on the overall analysis plan and first round indicators, see “Community Driven Development in Sierra Leone: GoBifo Analysis Plan.”

Almost all of the following indicators are available in the endline data only, so will not be analyzed in panel format.

H1: Participation in GoBifo increases trust.

Community Level outcomes

- Treatment communities are more likely to have collective market groups (E15).

H2: Participation in GoBifo increases collective action and contribution to public goods.

Household Level outcomes:

- Given the existence of each public asset—primary school, health clinic, TBA house, water well, dry floor, grain store, community center, latrine, football field—respondents in treatment areas are more likely to report making financial, labor and/or local material/food contributions to the construction or maintenance of the asset (C1E-C16E; C1F-C16F; C1G-C16G).

Secondary outcomes

- Given the existence of each public asset—secondary school, mosque, church, market—respondents in treatment areas are more likely to report making financial, labor and/or local material/food contributions to the construction or maintenance of the asset (C1E-C16E; C1F-C16F; C1G-C16G).
- Household in treatment communities are more likely to report contributing and contributing more to the building materials voucher (G15).

Community Level outcomes:

- Treatment communities are more likely to have used the tarp (T5, V1A).
- Treatment communities use the tarp more frequently (T8).
- Given use of cards, treatment communities are more likely to have begun to use the building materials or have a plan for how to use them (C14, C15, V2A).
- Treatment communities are more likely to have collective market groups (E15).
- Given use of cards, treatment communities are more likely to have brought the supplies back to the village (C13).
- Given that they have built something with the materials, quality of construction will be higher in treatment communities (V2Ai).
- Foot paths in treatment communities are less likely to be bushy (V3).
- Treatment communities are more likely to have brushed their foot path more recently (V4).

Secondary outcomes

- Given non-use of the tarp, treatment communities are more likely to have a plan for how to use the tarp (T10).

H3: Participation in GoBifo improves the quality and quantity of local public services infrastructure.

Household Level outcomes:

- In treatment communities, respondents report that the community has a larger stock of functional public infrastructure (C1B/C-C16B/C).
- Given the existence of each public asset—primary school, health clinic, TBA house, water well, dry floor, grain store, community center, latrine, football field—respondents in treatment areas are more likely to report making financial, labor and/or local material/food contributions to the construction or maintenance of the asset (C1E/F/G-C16E/F/G).

Community Level outcomes:

- Treatment communities are more likely to have used or plan to use the tarp for a public good and less likely to use it for private purposes (T6, T7, T10A/B).
- Given use of the cards, treatment communities are more likely to use or plan to use the cards towards a public good (C14A, C14B, C15A, C15B).
- Treatment communities are more likely to have a seed bank (G2).
- Treatment communities are more likely to have a grain store (G3).
- Treatment communities are more likely to have a football field and uniforms for their sports teams (G4 and G5).
- Given a football field, treatment communities are more likely to have modern equipment (G4A).
- Foot paths in treatment communities are less likely to be bushy (V3).
- Treatment communities are more likely to have brushed their foot path more recently (V4).

Secondary outcomes

- Treatment communities are less likely to use or plan to use the tarp for religious purposes (T6, T10A).
- Given use of the cards, treatment communities are less likely to use or plan to use the building materials for religious purposes (C14A, C15A).

Sub-hypothesis H3A: By improving stock of infrastructure, GoBifo encourages higher utilization of improved facilities and public health outcomes

Household Level outcomes

- Households more likely to use a pit/latrine as opposed to the bush for toilet facility (F4)
- Households more likely to use some kind of well as opposed to river or stream for drinking water (Round 1 survey)
- Farming households dry their grain on cement/concrete drying floor as opposed to the road, tarp, other make shift arrangement (L6B)

Secondary outcomes

- Prevalence of childhood diarrhea and worms is lower in treatment communities (F2)
- Given a recent birth, women in treatment communities are more likely to have an assisted delivery (F3)

Community Level outcomes

- Treatment households less likely to locate a latrine near a cooking facility (V5)

H4: Participation in GoBifo builds and strengthens community groups and networks.

Household Level outcomes:

- Respondents in treatment communities are more likely to be a member of, attend meetings and make labor or financial contributions to a women's group (N1).
- Respondents in treatment communities are more likely to be a member of, attend meetings and make labor or financial contributions to a youth group (N2).
- Respondents in treatment communities are more likely to be a member of, attend meetings and make labor or financial contributions to a seed multiplication group (N3).

- Respondents in treatment communities are more likely to be a member of, attend meetings and make labor or financial contributions to a fishing cooperative (N4).

Community Level outcomes:

- Treatment communities are more likely to have fishing cooperatives (G6).
- Treatment communities are more likely to have collective market groups (E15).

H5: Participation in GoBifo increases access to information about local governance.

Household Level outcomes:

- Respondents in treatment communities are more likely to be able to name the 3 items from the gift experiments (G1).
- In treatment communities, respondent views about if and how the tarp is being used or planned to be used are more likely to match purposes stated in the village meeting (HHS G10-G11A, VILL T5/6/10/10A).
- Given that the community cashed in some building material cards, respondents in treatment communities have more information on the cards: know the number of cards cashed in; know the total Leones raised; know who went to the store; have seen the building materials; have seen the receipt; and know items purchased (HHS G16A-F, VILL C4/6/7/10/11).

H6: GoBifo increases inclusion and participation in local planning and implementation, especially for poor and vulnerable groups; GoBifo norms spill over into other types of community decisions, making them more inclusive, transparent and accountable

Household Level outcomes:

- Respondents in treatment communities are more likely to attend a meeting to discuss how to share the salt/batteries (G2).
- Given attendance at the salt/batteries meeting, respondents in treatment areas are more likely to make public statements (G2A).
- Respondents in treatment communities are more likely to report that the salt/batteries sharing decision was made more democratically (G3 with 4 being the most democratic).
- Respondents in treatment communities are more likely to report that everyone had equal say in deciding how to share the salt/batteries (G4).
- Respondents in treatment communities are more likely to attend a meeting to discuss how to use the tarp (G6).
- Given attendance at the tarp meeting, respondents in treatment areas are more likely to make public statements (G6A).
- Respondents in treatment communities are more likely to report that the tarp decision was made more democratically (G7 with 4 being the most democratic).
- Respondents in treatment communities are more likely to report that everyone had equal say in deciding how to use the tarp (G8).
- Respondents in treatment communities are more likely to attend a meeting to discuss how to use the building materials cards (G12).
- Given attendance at the building materials cards meeting, respondents in treatment areas are more likely to make public statements (G12A).

- Respondents in treatment communities are more likely to report that the building materials cards decision was made more democratically (G13 with 4 being the most democratic).
- Respondents in treatment communities are more likely to report that everyone had equal say in deciding how to use the building materials cards (G14).
- Given the existence of each public asset—primary school, health clinic, TBA house, water well, dry floor, grain store, community center, latrine, football field—respondents in treatment areas are more likely to report attending a meeting about the asset (C1-16D).

Community Level outcomes:

- Treatment communities are more likely to have a meeting to discuss how to share the salt/batteries (S1).
- In treatment communities, it is more likely that everyone had equal say in deciding how to share the salt/batteries (S2).
- Treatment communities are more likely to have a meeting to discuss how to use the tarp (T1).
- In treatment communities, it is more likely that everyone had equal say in deciding how to use the tarp (T2).
- Treatment communities are more likely to have a meeting to discuss how to use the building materials cards (C1).
- In treatment communities, it is more likely that everyone had equal say in deciding how to use the building materials cards (C2).
- Given take up of the cards, treatment communities are more likely to produce the building materials receipt (C11).
- Given take up of the cards, treatment communities are more likely to keep other written records concerning the building materials cards (C12).
- Given that they have brought building materials back to the community, treatment communities are more likely to make a public presentation of the goods (C13C).
- Treatment communities are more likely to have had a community meeting more recently (G7).
- Given a community meeting, treatment communities are more likely to take minutes (G8).
- In treatment communities, disabled people are more likely to attend community meetings and to hold leadership positions (G9, G10).
- Treatment communities are more likely to be able to access their tarp (V1).
- Given use of cards, treatment communities are more likely to be able to access their building materials (V2).
- Treatment communities are more likely to store the tarp in a public place (T3).
- Given take up of the cards, treatment communities are more likely to store the cards/materials in a public place (C13B).
- Treatment communities are less likely to have had a recent episode of financial mismanagement/corruption (G11—although ambiguous as GoBifo introduced an influx of cash not present in controls).

Sub-Hypothesis H6A: By promoting more democratic and inclusive decision-making, GoBifo reduces elite capture.

Household Level outcomes:

- In treatment communities, a larger proportion of respondents report receiving some of the salt/batteries (G5).
- In treatment communities, a larger proportion of respondents report directly benefiting from the tarp (G9).
- Given take up of cars, in treatment communities, a larger proportion of respondents report directly benefiting from the building materials cards (G16).

Community Level Outcomes

- Treatment communities are less likely to use or plan to use the tarp for private purposes (T7, T10B).
- Given cashing in some cards, treatment communities are less likely to use or plan to use the building materials for private purposes (T6, T9B).
- Treatment communities are less likely to store the tarp in a private residence (T3A).
- Given take up of the cards, treatment communities are less likely to store the materials in a private residence (C14B/15B).
- Treatment communities are less likely to allow one person to pay for and use the building materials cards (C8).

H7: GoBifo increases public participation in local governance and politics

Household Level Outcomes

- Given the existence of each public asset—primary school, health clinic, TBA house, water well, dry floor, grain store, community center, latrine, football field—respondents in treatment areas are more likely to report involvement of the Paramount or Section Chief in the project (C1-16H).
- Given the existence of each public asset—primary school, health clinic, TBA house, water well, dry floor, grain store, community center, latrine, football field—respondents in treatment areas are more likely to report involvement of WDC or Local Council members in the project (C1-16I).

Community Level Outcomes

- Treatment communities more likely to have a Village Development Plan (G12)
- Given a VDP, treatment communities more likely to have a written VDP (G12A)
- Given a VDP, treatment communities more likely to use the tarp/building materials towards something identified in the VDP (G12B/C)

H8. By increasing trust, GoBifo reduces crime and conflict in community

Household Level Outcomes

- Treatment communities report less conflict (L7)
- Given an episode of conflict, treatment households more likely to have been able to resolve the conflict without involving external authorities (L7A).

Community Level Outcomes

- Treatment communities are less likely to report avoidance of inter-personal conflict as reason for not using tarp more frequently (T8, T10).
- Treatment communities are less likely to report avoidance of inter-personal conflict as reason for not taking up or using the cards (C3A, C15C).

H9: GoBifo changes local systems of authority, including roles and public perception of traditional versus local government

Household level outcomes:

- In treatment communities, respondents are less likely to report that the chief made the decision about the salt/batteries sharing without input from the community (G3).
- In treatment communities, respondents are less likely to report that the traditional authorities had the most say in the salt/batteries sharing decision (G4).
- In treatment communities, respondents are less likely to report that the chief made the decision about the tarp without input from the community (G7).
- In treatment communities, respondents are less likely to report that the traditional authorities had the most say in the tarp decision (G8).
- In treatment communities, respondents are less likely to report that the chief made the decision about the building materials cards without input from the community (G13).
- In treatment communities, respondents are less likely to report that the traditional authorities had the most say in the building materials cards decision (G14).

Secondary outcomes

- In treatment communities, respondents more likely to have reported that the village held a vote for the Village Headman (L2)
- In treatment communities, respondents more likely to have reported voting in an election for Village Headman (L2A)

Community Level outcomes:

- In treatment communities, traditional authorities are less likely to have the most influence over the salt/batteries sharing decision (S2).
- In treatment communities, traditional authorities are less likely to have the most influence over how to use the tarp (T2).
- In treatment communities, traditional authorities are less likely to have the most influence over how to use the building materials cards (C2).
- Treatment communities are less likely to store the tarp in the chief's house (T3).
- Given that the community stored the tarp in a private residence, it is less likely to belong to a traditional authority (T3A).
- Given that they cashed in some cards and brought the materials back to the village, treatment communities are more likely to store the building materials in a public place or a private house that does not belong to a traditional authority (C13B, C13Bi).
- Given that the community cashed in some cards, treatment communities are more likely to send a non-traditional authority to the building materials store (C4).

Secondary outcomes

- Treatment communities report broader participation in selection of Village Head (L3)
- Treatment communities report more equal say in selection of Village Head (L4)

- Treatment communities report a vote Village Head (L5)

H10: Participation in GoBifo improves general economic welfare

Household Level outcomes:

- Respondents in treatment communities are more likely to have participated in skills training (E1).
- Respondents in treatment communities are more likely to have started a new business (E2).
- Respondents in treatment communities are more likely to have sold some agricultural goods in the past month (E4).
- Given having sold some agricultural goods, respondents in treatment communities are more likely to sell externally (E4A).
- Respondents in treatment communities are more likely to have sold some non-agricultural goods in the past month (E5).
- Given having sold some non-agricultural goods, respondents in treatment communities are more likely to sell externally (E5A).

Secondary outcomes

- Respondents in treatment communities are more likely to have a personal bank account (E3).
- Respondents in treatment communities are more likely to have lent money (E6)
- Respondents in treatment communities are more likely to have borrowed money (E7)
- Respondents in treatment communities are more likely to have consumed protein as part of yesterday's main meal (F1)

Community Level outcomes

- Treatment communities are more likely to have a bank account (G1).
- Treatment communities have more petty traders (E1).
- Outside traders are more likely to come to treatment communities to buy agricultural and non-agricultural goods (E2, E3).
- More goods and services—bread, soap, garri, country cloth, eggs, sheep, palm oil, coal, carpentry, blacksmiths, tailoring—are available for sale in treatment communities (E4-E14).
- More people have started a new business in the past 3 years in treatment communities (E16).

Secondary outcomes

- Given a seed bank, treatment communities are more likely to charge fees for use (G3A).
- Treatment communities are more likely to have a money lender (E16).

H11: GoBifo changes political and social attitudes, making individuals more liberal towards women, more accepting of other ethnicities and “strangers”, and less tolerant of corruption and violence.

Community Level Outcomes

- Treatment communities more likely to have a female Village Head (L6, 7)
- Treatment communities more likely to have a younger Village Head (L8, 9)

NOT INTENDED FOR PUBLICATION

Appendix B: Project and Research Timeline

Oct-05	↓	<i>Hypothesis document drafted</i>	Jan-08		
Nov-05			Feb-08		Projects implemented
Dec-05	↓	Baseline Survey	Mar-08	↓	
Jan-06			Apr-08		Second grants disbursed
Feb-06		Ward Facilitator Training	May-08	↓	
Mar-06			Jun-08		
Apr-06	↓		Jul-08		Projects implemented
May-06			Aug-08	↓	
Jun-06			Sep-08		Third grants disbursed
Jul-06			Oct-08	↓	
Aug-06		Development Planning	Nov-08		
Sep-06			Dec-08		
Oct-06			Jan-09		Projects implemented
Nov-06			Feb-09		
Dec-06	↓		Mar-09		
Jan-07		Ward Development Committee Approval	Apr-09	↓	
Feb-07			May-09	↓	Follow-up survey 1
Mar-07	↓		Jun-09		Voucher program begins
Apr-07			Jul-09	↓	
May-07			Aug-09		<i>Pre-Analysis Plan archived with the Jameel Poverty Action Lab</i>
Jun-07					
Jul-07		Delays			
Aug-07			Sep-09	↓	Voucher program ends
Sep-07			Oct-09		
Nov-07			Nov-09	↓	Follow-up survey 2
Dec-07	↓				

NOT INTENDED FOR PUBLICATION

Appendix C: Simple Framework of Collective Action and Community Driven Development

We lay out a stylized local collective action framework that clarifies how an external intervention that provides financing and participation requirements might change local decision making and institutions, and derive implications that then structure our empirical analysis. In the model, a social planner determines the optimal investment in local public goods and sets a corresponding tax schedule, which is implemented with perfect compliance. Individual residents then decide whether or not to voluntarily participate in the planning and implementation of the public goods projects, taking their individual tax burden as given. We feel this framework is a reasonable approximation to the context of rural Sierra Leone (and similar societies with strong headmen), where the traditional village chief has the authority to levy fines and collect taxes to provide basic public goods, but there is variation in how involved residents are in decision making and implementation. In this setting, the external intervention lowers the *marginal* costs of local public goods provision through financial subsidies and works on the *fixed* costs of collective action by imposing participation requirements and instilling democratic norms of decision-making. We allow for minorities to have differential participation costs *ex ante*, which could be impacted by learning by doing or demonstration effects during project implementation.

We define three time periods: $t = 0$ denotes the pre-program period, $t = 1$ is the program implementation phase, and $t = 2$ is post-program. Our data correspond to these three time periods: the baseline survey was fielded in t_0 , the first follow-up survey captured activities that had been completed during the CDD intervention and launched the structured community activities, and the second follow-up survey explored what happened with the SCAs after the project had finished. As the marginal cost reductions are tied directly to external financial assistance, while the fixed organizing cost reductions could be internalized and maintained, we can speculatively gain some leverage over which channel(s) is at work by comparing impacts during and after project implementation. Moreover, studying the post-program period allows us to evaluate the persistence and “sustainability” of CDD impacts.

First consider the individual’s decision of whether to contribute time and voluntary labor to the planning and implementation of local public goods. While these decisions are taken in a decentralized fashion, they will aggregate in a way that affects the costs of public goods provision facing the social planner. The fact that individuals ignore the aggregate effect of their

voluntary labor captures the classic externality feature of collective action, and implies that even with perfect tax compliance, the planner will still not be able to achieve the first-best level of local public goods provision. The utility maximization problem for individual i at time t is:

$$\max_{\omega_t} u_{it} = V(g_t) + x_{it} + b_{it} * \omega_{it} \quad (1)$$

subject to the budget constraint:

$$y_{it} = x_{it} + k * \omega_{it} + \tau_{it} \quad (2)$$

where $V(\cdot)$ is a concave function capturing utility derived from consumption of the current stock of public goods g_t , where we assume for simplicity that $V(\cdot)$ is the same for all residents; x_{it} is private consumption; b_{it} is the individual's psychic or social benefit of participating in collective action, which captures the intrinsic value of civic involvement;¹ and ω_{it} is an indicator variable that equals one if the individual participates and zero otherwise. Given historical legacies of exclusion, we assume that while some women and youth may derive positive utility from participation they face additional social costs of speaking up and thus, on average, their net benefits of civic participation are lower than for the traditional elder male elites.

The individual's budget constraint is determined by exogenous potential income y_{it} , which we define as disposable income beyond a subsistence threshold; the cost of project participation $k > 0$, which reflects the opportunity cost of time spent engaging in public goods provision instead of wage-earning activities; and the tax τ_{it} , which is set by the social planner. For simplicity, assume a tax proportional to net income, $\tau_{it} = \tau_t(y_{it} - k * \omega_{it})$, where $\tau_t \in [0,1]$ is the tax rate. The first order conditions imply that the individual chooses to participate in collective action if and only if the net benefits are nonnegative: $b_{it} - k(1 - \tau_t) \geq 0$.

Note that our model concerns only the quantity of public goods and not their type. An alternative way to conceptualize the problem would be to assume that residents have heterogeneous preferences over the type of good—i.e., a primary school versus a latrine—and that the strength of these preferences drives the choice to participate. For example, Alesina, Baqir and Easterly (1999) show that communities with more polarized preferences agree to lower tax contributions and thus fewer public goods. Similarly, Osborne, Rosenthal and Turner (2000) find that when participation is costly only a subset of residents with the most extreme views will attend meetings to determine public choice on an issue. We do not pursue this

¹ We do not separate out being actively involved in decision making and involvement in provision (voluntary labor) as one usually necessitates the other as anyone who has spoken up in a meeting of a voluntary group can attest.

approach as we find remarkably muted differences in public spending preferences across social groups in the baseline data.²

Next consider the social planner's local public goods investment decision for the current time period, $q_t \geq 0$, given the stock of public goods inherited from the previous period, g_{t-1} , and assuming that the stock depreciates at rate δ from one period to the next. The planner's objective is to maximize the sum of individual utilities in period t :

$$\max_{q_t, \tau_t} \sum_{i=1}^N u_{it} = \sum_{i=1}^N V(\delta g_{t-1} + q_t) + (1 - \tau_t)(\sum_{i=1}^N y_{it} - k\omega_t) + \sum_{i=1}^N b_{it} * \omega_{it} \quad (3)$$

subject to the budget constraint:

$$c_t(q_t) = p_t q_t + \gamma_t(\omega_t, \varphi_t) \leq \tau_t(\sum_{i=1}^N y_{it} - k\omega_t) \quad (4)$$

where the cost function c_t has a marginal component, $p_t q_t$, where p_t is the price of construction materials, as well as a fixed coordination cost of collective action γ_t , which is a function of the sum of individual participation decisions ($\omega_t \equiv \sum_{i=1}^N \omega_{it}$) and the capacity of local institutions, φ_t .

Following the theory motivating participatory governance, we assume that the fixed costs of collective action are falling in both the capacity of local institutions ($\frac{\partial \gamma_t}{\partial \varphi_t} \leq 0$) and community participation ($\frac{d\gamma_t}{d\omega_t} + \tau_t k \leq 0 \forall \tau_t$); we assess the empirical validity of these assumptions below.

The latter condition would be true if, for example, greater community involvement made public goods provision easier and if more involvement in decision making created greater support for the process.³ An alternative perspective, which we do not focus on here, is that this derivative switches sign at sufficiently high participation levels if, for example, the expression of too many

² For example, we see few differences in the priorities expressed by men as compared to women, and youths as compared to their elders, in response to the baseline survey question "If your community was given 5 million (5,000,000) Leones (US\$1,667), what do you think the community should spend it on first?" Specifically, 25.1% of women versus 28.3% of men cited education projects as their first choice (along with 27.1% of youths versus 26.1% of non-youths); 13.0% versus 11.0% cited water and sanitation (12.0% versus 11.9%); 10.4% versus 10.3% cited health (10.6% versus 10.5%); and 9.2% versus 11.2% cited agriculture (10.7% versus 9.9%). Simple t-tests suggest that none of these differences are significant at 95% confidence. Moreover, Glennerster, Miguel and Rothenberg (2010) find no evidence that ethnic diversity, which could proxy for polarized preferences, inhibits local public goods provision in Sierra Leone. Although we are unable to test this hypothesis here, if heterogeneous preferences are more pronounced in other settings, the consensus building process emphasized by CDD facilitators might conceivably narrow the differences in preferences across groups and thereby trigger greater public goods provision.

³ Olken (2010) finds that choosing local development projects by direct voting instead of representative meetings increases satisfaction with and the perceived legitimacy of the project, even though the choice process has no impact on the type of project selected. He also finds that voting increases plans to use and contribute labor to the project and beliefs about the project's fairness and value. In a laboratory setting, Dal Bó et al. (2010) show that cooperation increases more when players vote to implement a change in payoffs that facilitates coordination than when the same change is imposed exogenously, again implying that having a direct say in the decision-making process can have an effect on behavior beyond the impact of the specific policy choice *per se*.

opinions leads to conflict or congestion in deliberation (Olson 1982) or impairs technical decision-making (Khwaja 2004). This reversal in sign may plausibly be more evident in contexts with larger baseline heterogeneity in preferences over public goods. Importantly, even if participation has no effect on coordination costs at all, CDD advocates argue that local civic engagement carries intrinsic benefits, and therefore project participation belongs in the individual utility function and its enhancement becomes an appropriate objective for intervention.

The standard Kuhn-Tucker Lagrangean for the planner's optimization problem is:

$$NV(\delta g_{t-1} + q_t) + (1 - \tau_t)(\sum_{i=1}^N y_{it} - k\omega_t) + \sum_{i=1}^N b_{it} * \omega_{it} - \lambda (p_t q_t + \gamma_t(\omega_t, \varphi_t) - \tau_t(\sum_{i=1}^N y_{it} - k\omega_t)) \quad (5)$$

The first order conditions imply that the planner either chooses the efficient level of investment (q_t^*) with a corresponding tax rate (τ_t^*), or zero public investment and no taxes. Given the extreme poverty and limited public services in rural Sierra Leone, assume that the marginal benefit of public goods is greater than private consumption, yielding an interior solution:

$$q_t^* = V'^{-1}(p_t/N) - \delta g_{t-1} \quad (6)$$

$$\tau_t^* = (p_t q_t^* + \gamma_t(\omega_t, \varphi_t)) / (\sum_{i=1}^N y_{it} - k\omega_t) \quad (7)$$

The planner chooses q_t^* if it is affordable, and $\bar{q}_t < q_t^*$ that exhausts the budget if it is not.

Within this framework, a participatory local governance intervention aims to have three separate impacts. First, by subsidizing the cost of construction materials, the financial grants reduce the marginal cost of public goods provision, p_t . Second, participation requirements for women and youth—for example, they must serve as a signatory on financial accounts and evidence of their participation in planning and implementing projects is a prerequisite for the release of the block grants—aim to increase the benefits of participation for these historically marginalized groups. Such requirements should automatically translate into greater participation in collective activities during project implementation for these groups. Moreover, if women and young men learn-by-doing, or if their participation exerts positive demonstration effects on others, shifting social norms, this experience could trigger a persistent increase in their benefits of participation, b_{it} , sustainably raising ω . Third and finally, this increase in community participation, accompanied by the establishment of village development committees, plans and bank accounts (boosting φ_t), aims to reduce the fixed coordination costs of collective action, γ_t .

The idea is that once an organizing body is in place and residents have reached consensus on local priorities, the next collective project should be less costly to identify and execute. As such, the original GoBifo project funding proposal emphasizes the sustainability, “durability” and broad mandate of these new structures, suggesting they will become “the focal point for development interventions” and other forms of local collective action in the future (World Bank 2004).

How these three distinct effects will alter public goods investment depends on whether the village budget constraint binds. We begin with the benchmark interior solution case, where the budget constraint is not binding, noting that we feel this case is less empirically realistic. If the village budget constraint is not binding, the social planner will chose an investment amount q_t^* (as defined in Equation 6) that brings the existing stock of public goods up to the efficient level g_t^* , which is defined as the point at which the sum of marginal benefits exactly equals the marginal cost of the last unit of public investment:

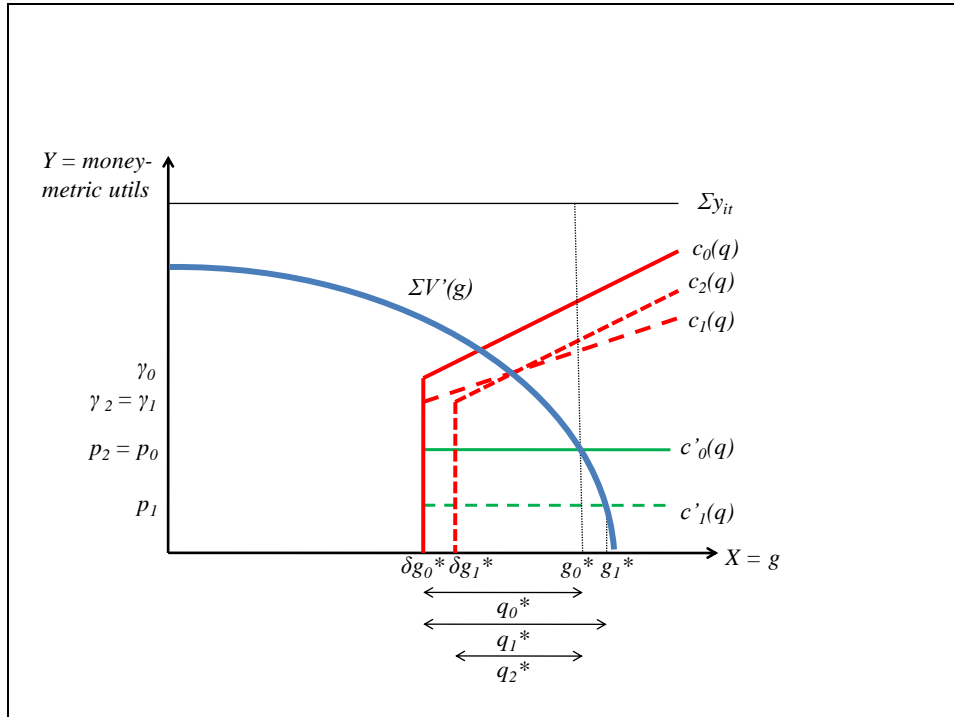
$$g_t^* = \delta g_{t-1} + q_t^* = V'^{-1}(p_t/N) \quad (8)$$

Notice that in steady state ($g_t^* = g_{t-1}^*$), the optimal current investment is the amount needed to exactly replenish the loss in last period’s stock due to depreciation:

$$q_t^* = (1 - \delta)g_{t-1}^* \quad (9)$$

Consider the effects of the CDD project in this case. Figure A1 below depicts how the decrease in coordination costs, through greater participation and the establishment of organizational structures, lowers the fixed cost of collective action from γ_0 to γ_1 (abusing notation slightly in what follows, let γ_t signify $\gamma_t(\omega_t, \varphi_t) + \tau_t k \omega_t$). To the extent that these new institutions and norms are durable, the effect persists into the post-program period, where similarly $\gamma_2 < \gamma_0$. In addition, the financial grants in $t = 1$ reduce the marginal cost of public goods materials from p_0 to p_1 , which has a corresponding attenuating impact on the slope of the total cost line $c_1(q)$. Without the financial subsidy in t_2 , marginal costs return to pre-program levels ($p_2 = p_0$).

Figure A1: The Interior Solution Case



The optimal stock of public goods is determined by the intersection of the marginal benefits curve and the marginal cost line. In the pre-program period, the optimal current investment q_0^* replenishes the depreciated steady state stock δg_0^* up to optimal public goods provision g_0^* . By assumption, the community's budget envelope surpasses the total cost associated with this investment ($\sum_{i=1}^N y_{it} > c_0(q_0^*)$) in this case. During program implementation, the financial grants subsidize the marginal cost of construction ($c'_1(q) < c'_0(q)$), and thus increase the current investment in public goods (q_1^*) beyond the replenishment rate to attain the new optimal stock g_1^* . Note that this increase is driven entirely by the reduction in marginal costs and that the reduction in coordination costs has no impact on public goods investment. In this case, existing village level institutions were already adequate for the task of providing small scale public goods, and the reduction in coordination costs is instead reflected in higher household consumption (and welfare) through a lower tax burden.

Moving forward to the post-program period ($t = 2$), the financial subsidy has been removed which returns prices to the baseline level p_0 , while the reduction in coordination cost endures. The planner optimally chooses q_2^* which returns the depleted $t = 1$ public goods stock back to the steady state optimum of g_0^* . Notice that the post-program investment is both less

than the implementation phase investment (in $t = 1$) and *less than the steady state pre-program level of investment*, since the community optimally draws down the “artificially” high levels of public good investments made during program implementation (due to the temporary construction price subsidies). Thus in the unconstrained case, we expect a large subsidy of material costs as seen in a CDD intervention to trigger a short term increase in public goods followed by a post-program contraction in investment, accompanied by a temporary increase in household consumption.

This inter-temporal substitution is evident in the first order conditions:

$$q_t^* = g_t^* - \delta g_{t-1}^* = V'^{-1}(p_t/N) - \delta V'^{-1}(p_{t-1}/N) \quad (10)$$

When current prices fall below last period’s prices ($p_t < p_{t-1}$), the concavity of $V(\cdot)$ implies that investment increases. During project implementation, the subsidy drives down p_1 relative to p_0 , thus leading to greater current spending q_1^* to attain the higher optimum stock g_1^* . Conversely, when the subsidy ends and prices reset to baseline levels, the now relatively higher current prices ($p_2 > p_1$) imply that current investment falls ($q_2^* < q_1^*$). Moreover, the larger investment made in $t = 1$ implies that the depreciated stock facing the planner is higher than it was in the pre-program period ($\delta g_1^* > \delta g_0^*$). Thus replenishing the stock to the optimal steady state level ($g_2^* = g_0^*$) requires a smaller investment than in steady state ($q_2^* < q_0^*$).

Given that Sierra Leone is one of the world’s poorest countries, it seems more reasonable to assume that study communities face a binding budget constraint that keeps public investment well below optimal levels. This means that there are plenty of public investments—in latrines, water wells, primary schools—whose village-wide marginal benefits exceed the marginal cost of construction, yet are simply unaffordable given the community’s tax base and inability to borrow in light of pervasive financial market imperfections. Under these constraints, profitable investments become unaffordable because construction prices and/or coordination costs are prohibitively high. As with the interior solution above, here we expect the financial subsidy to increase current investment in public goods during CDD project implementation. We will now also find that reducing fixed coordination costs enhances public investment, and moreover, this effect should be evident in both the implementation and post-program periods. Compared to the first, this second constrained budget case thus better corresponds to the claims by CDD advocates that a temporary intervention can permanently improve the quality of local public goods by reducing the costs of collective action.

To see this, note that when the budget constraint binds, the planner chooses the maximum affordable investment as determined by the total cost function (in equation 4 with $\tau_t = 1$):

$$\bar{q}_t = 1/p_t \left(\sum_{i=1}^N y_{it} - k\omega_t - \gamma_t(\omega_t, \varphi_t) \right) \quad (11)$$

The affordable investment is decreasing in both construction prices and coordination costs:

$$\frac{\partial \bar{q}_t}{\partial p_t} = -1/p_t^2 \left(\sum_{i=1}^N y_{it} - k\omega_t - \gamma_t(\omega_t, \varphi_t) \right) < 0 \quad (12)$$

$$\frac{\partial \bar{q}_t}{\partial \gamma_t} = -1/p_t < 0 \quad (13)$$

Thus in $t = 1$, the CDD project relaxes the budget constraint by both lowering the marginal cost of materials through the grants, and decreasing the fixed coordination costs by enhancing community participation and capacity. These together imply that current investment increases ($\bar{q}_1 > \bar{q}_0$). In $t = 2$, communities continue to enjoy greater public investment due to the reduced coordination costs ($\gamma_2 < \gamma_0$), however, the loss of the financial subsidy places current investment somewhere between baseline and implementation levels ($\bar{q}_0 < \bar{q}_2 < \bar{q}_1$).

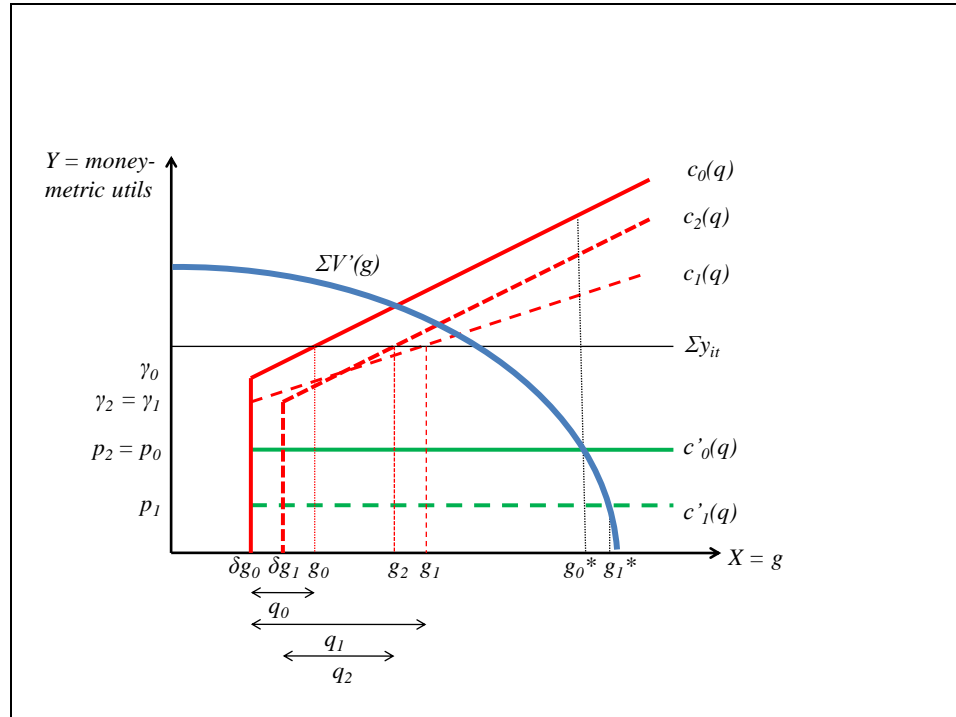
The constrained scenario is depicted graphically in Figure A2. Note that the total investment associated with obtaining the optimal public goods stock (which is g_0^* in steady state, defined by the intersection of the marginal cost and benefit curves) is not affordable in any time period by assumption ($\sum_{i=1}^N y_{it} < c_t(q_t^*)$). Current investment is instead determined by the intersection of the total cost and budget lines at a corner. Assuming that the community is in steady state where current investment exactly replenishes the depreciation of last period's stock⁴, the planner faces a stock of δg_0 in both t_0 and t_1 . Because the $c_1(q)$ cost line has both a lower intercept and flatter slope than the baseline $c_0(q)$, investment \bar{q}_1 exceeds pre-program steady state investment \bar{q}_0 . In $t = 2$, the end of the subsidy adjusts the slope of the cost line back to baseline levels, while the durable improvements in coordination maintain the lower intercept. This combination allows current investment \bar{q}_2 to again exceed \bar{q}_0 , but by less than in $t = 1$.^{5,6}

⁴ The alternative assumptions would be a current investment that exceeds or falls short of replenishment. The steadily increasing stock implied by the former would eventually lead to the unconstrained case; while the steady decrease implied by the latter would suggest a starting point near zero, with no substantive changes to our results.

⁵ Whether the final stock in t_2 exceeds that in t_1 or not depends on the depreciation rate and the size of the subsidies.

⁶ We considered possible income effects. The quasilinear utility function rules out the possibility that higher local income change local demand for public goods. A plausible alternative would be to make the cost of participating a function of income ($k_{it} = f(y_{it})$), so that as people become wealthier the opportunity cost of their time increases and makes them less willing to attend meetings. Given that the constrained case appears a better match for our empirical setting (and the fact that program grants were quite modest), the first order effects of increased income

Figure A2: The Constrained Case



This framework generates three empirical predictions. First, the combination of financial subsidies and lower coordination costs should unambiguously increase public goods investment during the program implementation phase. To assess this, indicators under outcome family A first evaluate whether the grants were in fact delivered to villages and new institutions established on the ground. The organizational capacity (community participation) of control communities is $\varphi_0(\omega_0)$ in our model, which we expect to be weaker than in treatment communities, as captured in $\varphi_1(\omega_1)$. Other measures in outcome family B regarding the stock of local public goods assess the impact of the program support on public investment levels, where public goods investment in treatment (control) communities during the life of the program corresponds to $q_1(q_0)$ in the model.

Second, the model implies that establishment of durable village institutions should lead to greater investment in public goods in the post-program period, which is captured most directly by the take-up of the building materials vouchers in SCA #1, as well as several other measures in

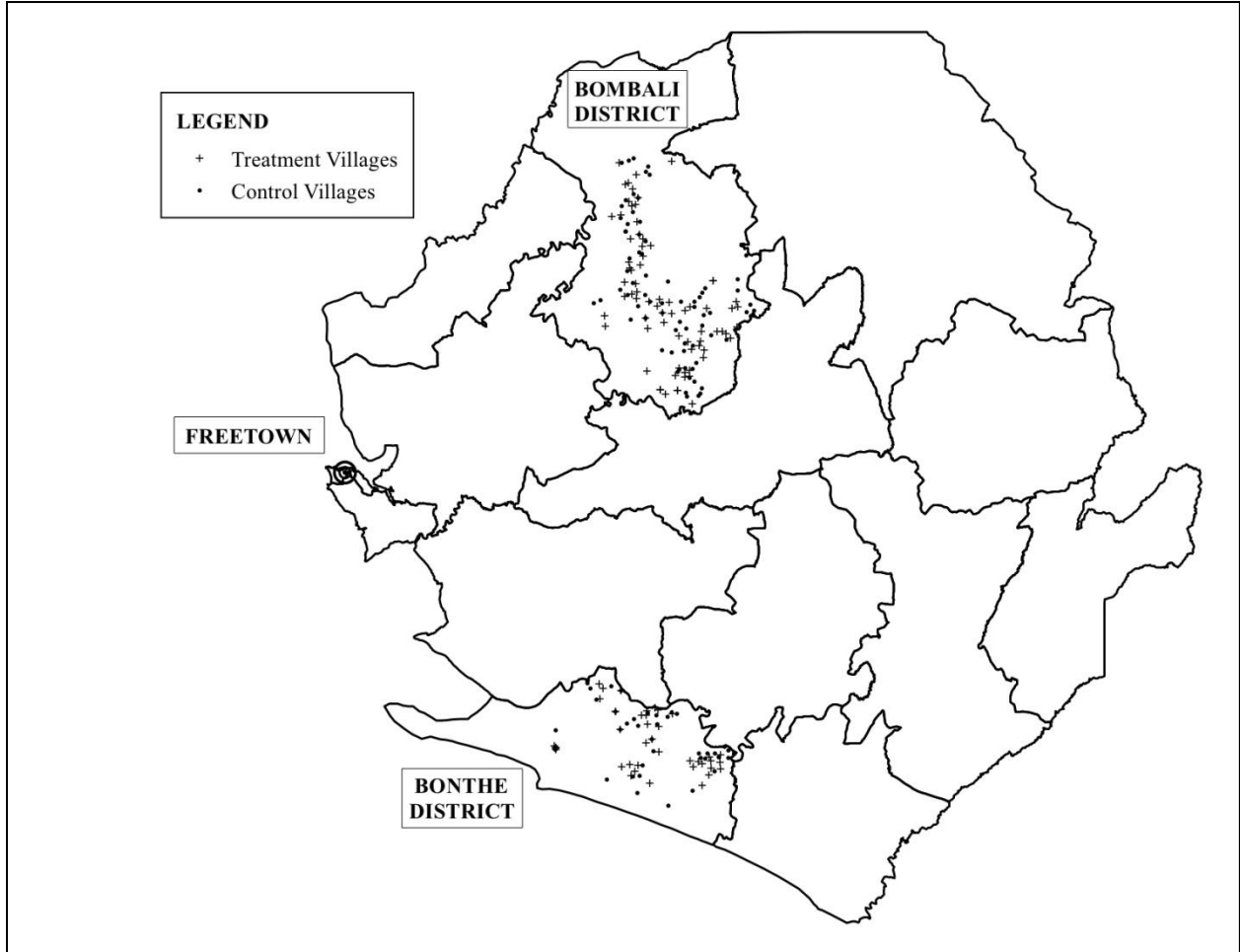
would be to shift out the budget constraint and increase the current investment in public goods. Any offsetting negative effects due to higher opportunity costs of time in this setting would likely be of second order.

outcome family B concerning collective action beyond the direct program sphere. Post-program outcomes in the treatment villages correspond to q_2 , again versus q_0 in the control group.

Third, if participation requirements for women and youth trigger a permanent enhancement in the net individual benefit of participation they experience, we should see more women and youths attending community meetings and taking part in decision-making post-program (reflecting ω_2 in the treatment group and ω_0 in control), as captured by several outcomes in the gift choice component of SCA #2 and household survey responses concerning civic engagement in non-program spheres. Moreover, enhancing participation by marginalized groups could initiate broader changes in social norms and attitudes, as captured in several additional hypotheses under outcome family B examining this community “software.”

NOT INTENDED FOR PUBLICATION

Appendix D: Location of Research Communities



NOT INTENDED FOR PUBLICATION

Appendix E: Sampling Details

This section discusses the sample selection process in more detail. It explains: i) the selection of wards within districts; ii) the onsite randomization process for the 8 research communities in Bonthe Town; and iii) the partial re-sampling of the research areas. Importantly, none of these issues systematically affect either treatment or control communities, and thus should not bias the treatment effect estimates.

After the districts were selected, the sample of wards (the lowest administrative unit of local government) was chosen to avoid duplication of effort with a similar community development program, the National Social Action Project (NSAP). GoBifo project management collaborated with NSAP to avoid overlap with their programs in particular wards. Since NSAP had already selected the most vulnerable wards (as classified by its own poverty mapping exercise) for its programs, GoBifo chose to work in all the remaining wards. Thus our sample—of treatment and control communities—likely represents slightly better-off communities in these districts, although by any measure the research areas are very poor.

While nearly all of the randomization was conducted electronically, the randomization process for the island communities of Bonthe Town (which comprise 3.4% of our sample) was conducted manually by a public lottery. Since there was no community list from the Statistics Sierra Leone (SSL) 2004 Population and Housing Census available for the Town to use in the computerized process, estimation of community size and selection into treatment and control groups was completed onsite. As Town sections are roughly comparable in size to villages in Bonthe District, the project team treated each section as a separate community. Also, since the wards in Bonthe Town are substantially smaller than those in the District, GoBifo decided to intervene in only two (instead of six) communities per ward. The research team thus wrote the names of all sections in the target wards on individual pieces of paper and drew the four project and four control sites from a box in the presence of the Town Section Heads, district councilors and two independent observers.

As explained in Section 3.2 of the paper, community-level eligibility for the GoBifo program was determined by: i) total number of households (20 to 200 households in Bombali district and 10 to 100 in Bonthe); and ii) location within a targeted ward in one of the two districts. At the time of sample selection, the most up-to-date information on community size

was from the 2004 Census. As the Census data entry process was still ongoing, the only electronically available measures were the pre-census cartographic team estimates of total households per locality. We thus used this measure to eliminate communities that were too small or large, and on 17 October 2005 conducted an initial randomization on the resulting eligibility pool to select 228 villages, composed of 114 treatment and 114 control communities (or 6 treatment and 6 control in each of 19 wards). The first 3 days of field work surveyed 32 communities from this initial list. However, the field team reported non-trivial differences in the community size estimates from the cartographic team and what they encountered in the villages, frequently off by 50 or more households. The research team thus manually generated a new list of total households for all communities in the target wards using the hard copies of the 2004 Census enumeration area summary books. Using this more accurate measure of total households per village to define a new pool of eligible villages, while retaining the 32 villages already surveyed due to budget reasons, we conducted a second randomization on 18 November 2005 for the remaining 196 villages.

There were 11 communities in this second sample for which SSL was unable to locate the full census books, and was therefore unable to compile household listings. One further village was found to be empty as it was not a permanent settlement. Replacements for these 12 communities were randomly sampled from the respective wards and randomly divided into treatment and control.

Nine selected communities in one particular chiefdom were assigned to the wrong Local Council ward. As background, since the 2004 Census had not yet been completed, the National Electoral Commission had to rely on old Census data in drawing ward boundaries for the 2004 District Council elections. This process created some confusion on the ground concerning which chiefdom sections individual Councilors represented. Direct reports from the relevant District Councilors revealed that 9 communities from our sample needed to be replaced in order to retain the balance of 6 treatment and 6 control communities in each of the 3 targeted wards in one chiefdom (Gbindembu Ngowahun). The research team made the necessary replacements by randomly selecting communities from the respective wards and randomly dividing them into treatment and control.

It is important to note that all of these steps reflect adjustments to the sample and none of them compromise the integrity of the random assignment.

NOT INTENDED FOR PUBLICATION

Appendix F: Treatment versus Control Comparison of All Outcomes in Baseline Data

Outcome in baseline data	Baseline mean for controls	T-C difference at baseline	Standard error	N	Hypothesis
	(1)	(2)	(3)	(4)	(5)
Attended Ward Development Committee meeting	0.199	-0.004	(0.016)	235	H1, H10
Met Councillor	0.358	-0.007	(0.020)	235	H1, H10
Village development committee	0.547	0.060	(0.059)	232	H1, H4, H10
Visit by Local Councillor	0.339	-0.007	(0.054)	228	H1, H9
Visit by WDC member	0.148	-0.015	(0.047)	228	H1, H9
Functional community center	0.231	-0.085+	(0.046)	233	H2
Functional drying floor	0.235	0.051	(0.051)	231	H2
Functional grain store	0.094	0.063	(0.040)	233	H2
Functional market	0.009	-0.000	(0.012)	232	H2
Functional peripheral health unit	0.045	0.007	(0.027)	227	H2
Functional primary school	0.409	0.079	(0.057)	230	H2
Functional water well	0.36	0.102+	(0.059)	229	H2
Community financial contribution to community center	0.839	-0.048	(0.091)	56	H2, H4
Community financial contribution to drying floor	0.3	-0.113	(0.088)	86	H2, H4
Community financial contribution to grain store	0.133	0.167	(0.150)	38	H2, H4
Community financial contribution to health unit	0.571	-0.801	(0.532)	14	H2, H4
Community financial contribution to primary school	0.7	-0.036	(0.081)	118	H2, H4
Community financial contribution to water well	0.816	0.037	(0.077)	108	H2, H4
Proposal to NGO	0.339	-0.005	(0.059)	231	H2, H4
Household PCA asset score	-0.061	0.109	(0.078)	235	H3
Community better off than others in area	0.313	0.042	(0.062)	201	H3
Household sold agricultural goods	0.298	0.011	(0.024)	234	H3
Any petty traders in community	0.544	-0.006	(0.059)	226	H3
Household PCA asset quintile	2.757	0.089	(0.090)	235	H3
Total sources of household income	1.48	-0.113	(0.071)	236	H3
Participated in footpath brushing	0.716	-0.009	(0.017)	235	H4
Existence of communal farm	0.421	0.005	(0.061)	230	H4
Existence of community teachers	0.931	-0.100+	(0.054)	119	H4
Days worked on communal farm	4.913	-0.758	(0.784)	158	H4
Leones paid to community teacher	43918.92	-7494.00	(11651.56)	75	H4
Community teacher remunerated	0.907	-0.011	(0.062)	100	H4
Community teacher trained	0.673	-0.220*	(0.088)	97	H4
Worked on communal farm in past year	0.223	0.014	(0.031)	235	H4
Contributed money to labor sharing gang	0.288	0.022	(0.030)	222	H4, H8
Contributed money to credit/savings group	0.794	-0.032	(0.045)	196	H4, H8
Contributed money to school PTA	0.669	0.055	(0.040)	197	H4, H8
Contributed labor to labor sharing gang	0.635	0.015	(0.035)	222	H4, H8
Contributed labor to school PTA	0.513	0.004	(0.040)	197	H4, H8
Attended community meeting	0.696	-0.008	(0.019)	235	H5
Attended communal farm meeting	0.835	-0.088+	(0.046)	151	H5
Attended meeting to decide teacher pay	0.601	-0.016	(0.036)	182	H5
Spoke during community meeting	0.468	0.003	(0.026)	235	H5
Spoke during communal farm meeting	0.628	0.060	(0.056)	141	H5
Spoke during teacher pay meeting	0.629	-0.027	(0.040)	162	H5
Attended labor sharing group meeting	0.534	-0.030	(0.036)	222	H5, H8
Attended credit/savings group meeting	0.651	0.001	(0.049)	196	H5, H8
Attended school PTA meeting	0.821	0.048	(0.032)	197	H5, H8

No conflict taken to traditional courts	0.508	0.008	(0.018)	235	H6
Not traditional authority who decided teacher pay	0.688	0.065	(0.099)	92	H6
Defaulters on teacher pay not reported to the Chief	0.404	0.086	(0.104)	101	H6
Relative trust in Local Council versus Chiefdom	-0.052	0.013	(0.015)	235	H6
Willingness to entrust neighbor with market purchases	0.848	-0.010	(0.015)	235	H7
Belief that money left in community would be recovered	0.216	-0.021	(0.018)	235	H7
Member of credit/savings group	0.245	-0.027	(0.024)	235	H7
Has entrusted a neighbor with market purchases	0.809	0.009	(0.014)	235	H7
Trust in central government officials	0.608	0.001	(0.018)	235	H7
Trust in chiefdom officials	0.664	-0.011	(0.019)	235	H7
Trust in Local Council	0.611	0.003	(0.021)	235	H7
Trust people from outside community	0.469	0.002	(0.021)	235	H7
Trust community members	0.856	0.020	(0.014)	235	H7
Member of labor sharing gang	0.5	-0.015	(0.026)	235	H8
Member of school PTA	0.327	0.016	(0.023)	235	H8
Member of social club	0.219	0.025	(0.020)	235	H8
Helped re-thatch neighbor's house	0.395	0.008	(0.021)	235	H8
Received help re-thatching own roof	0.712	0.022	(0.035)	222	H8
Index of public information displayed in community	0.222	0.051*	(0.026)	229	H9
Able to name Local Council Chair	0.094	0.020	(0.014)	235	H9
Able to name who spends market dues	0.391	0.021	(0.046)	162	H9
Able to name date of next general election	0.199	-0.004	(0.019)	235	H9
Able to name Local Councillor	0.334	0.021	(0.026)	235	H9
Able to name Paramount Chief	0.685	-0.016	(0.023)	235	H9
Able to name Local Council project	0.056	-0.005	(0.011)	235	H9
Able to name Section Chief	0.582	0.021	(0.027)	235	H9
Able to name tax rate for adults	0.821	-0.020	(0.018)	235	H9
Listens to radio for information about government	0.427	0.005	(0.021)	235	H9
Believe could change unjust Council policy	0.421	-0.010	(0.020)	235	H10
Believe could change unjust Chiefdom policy	0.416	-0.020	(0.020)	235	H10
Member of community stood for Local Council	0.095	-0.001	(0.037)	232	H10
Member of community stood for Paramount Chief	0.107	0.026	(0.041)	222	H10
Member of community stood for Section Chief	0.336	0.085	(0.063)	230	H10
Member of community stood for WDC membership	0.198	0.014	(0.049)	231	H10
Voted in 2004 local elections	0.846	-0.006	(0.015)	235	H10
Voted in 2003 general elections	0.891	-0.009	(0.014)	235	H10
No report of physical fight in past year	0.974	-0.006	(0.006)	235	H11
No report of theft in past year	0.65	-0.006	(0.021)	235	H11
No report of witchcraft in past year	0.963	-0.004	(0.008)	235	H11
No conflict over money in past year	0.767	0.022	(0.017)	235	H11
Given money conflict, no violence ensued	0.885	-0.025	(0.035)	200	H11
Both youth and non-youth work on communal farm	0.677	-0.042	(0.077)	98	H12
No children work on communal farm	0.167	0.132+	(0.077)	98	H12
Both men and women work on communal farm	0.729	0.013	(0.063)	98	H12
Different tribes work on communal farm	1.128	0.077	(0.112)	97	H12
Index of how inclusive the labor gang is	0.443	-0.024	(0.021)	222	H12
Index of how inclusive the credit/savings group is	0.577	0.004	(0.028)	196	H12

Notes on table: i) significance levels indicated by + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$; ii) robust standard errors; iii) the T-C difference is the pre-program "treatment effect" run on the baseline data aggregated to the village-level mean, using a minimal specification that includes only fixed effects for the district council wards (the unit of stratification) and the two balancing variables from the randomization (total households and distance to road); and iv) as the original distance to road variable contained missing values, it has been replaced here and in all other tables with a more accurate measure with no missing values.

NOT INTENDED FOR PUBLICATION
Appendix G: Raw Results for All Outcomes

Row Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
	(1)	(2)	(3)	(4)	(5)
1 Have you personally talked with a member of the WDC or participated in a meeting organized by the WDC in the past year?	0.090	0.039**	(0.013)	236	H1, H10
2 Does this community have a bank account?	0.081	0.706**	(0.045)	226	H1, H3
3 In the past year, have you talked with the Local Councillor or participated in any meeting organized by the council?	0.184	0.028	(0.019)	236	H1, H10
4 Since January 2006, has this community had a Village or Community Development Committee (VDC or CDC)?	0.458	0.399**	(0.052)	235	H1, H4, H10
5 Does this community have a village development plan (i.e. an agreed plan with specific priorities for what the community will do for its own development over the next few years)?	0.617	0.299**	(0.048)	221	H1, H10
6 Has this community been visited by a Local Council member in the past one year?	0.322	0.026	(0.058)	236	H1, H9
7 Has this community been visited by a Ward Development Committee member in the past year?	0.212	0.132*	(0.056)	234	H1, H9
8 [Given functional community center in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this community center?	0.251	0.227**	(0.054)	95	H1, H10
9 [Given functional drying floor in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this drying floor?	0.243	0.128*	(0.062)	115	H1, H10
10 [Given functional grain store in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this grain store?	0.144	0.260**	(0.076)	71	H1, H10
11 [Given functional latrine in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this latrine?	0.219	0.155**	(0.041)	169	H1, H10
12 [Given functional health clinic in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this PHU?	0.615	-0.218	(0.193)	26	H1, H10
13 [Given functional primary school in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this primary school?	0.415	0.182**	(0.055)	138	H1, H10
14 [Given functional football/sports field in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this football/sports field?	0.163	0.080*	(0.035)	181	H1, H10

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
15	[Given functional traditional birth attendant (TBA) house in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this TBA house?	0.399	-0.030	(0.107)	70	H1, H10
16	[Given functional water well in the community] Was a member of the Ward Development committee or Local Council directly involved in the planning, construction, maintenance or oversight of this well?	0.354	0.110*	(0.044)	150	H1, H10
17	Ask to be taken to the nearest bush path. This should be a foot path (not a road for cars) that the community uses the most. Ask the community: when was the last time this community brushed this foot path? [days to last brushing]	-41.263	-8.547	(6.225)	192	H2, H4
18	Does the community have a community center and is it functional?	0.212	0.156**	(0.047)	236	H2
19	Does the community have a drying floor and is it functional?	0.237	0.160**	(0.055)	228	H2
20	Does the community have a grain store and is it functional?	0.136	0.067	(0.045)	235	H2
21	Does the community have a latrine and is it functional?	0.462	0.208**	(0.059)	234	H2
22	Does the community have a market and is it functional?	0.017	-0.001	(0.016)	235	H2
23	Does the community have a public health unit and is it functional?	0.060	0.017	(0.032)	235	H2
24	Does the community have a primary school and is it functional?	0.462	0.071	(0.057)	234	H2
25	Does the community have any wells (mechanical or bucket) and are any of them functional?	0.459	0.032	(0.063)	222	H2
26	Do any of the local sports teams have uniforms / vests?	0.100	0.102*	(0.048)	225	H2
27	Does the community have a football / sports field and is it functional?	0.444	0.069+	(0.040)	236	H2
28	Does the community have a traditional birth attendant (TBA) house and is it functional?	0.079	0.172**	(0.035)	235	H2
29	Ask to be taken to the nearest bush path. This should be a foot path (not a road for cars) that the community uses the most. Walk 100 steps down the path (i.e. look at the middle, not the start of the path). In your own opinion, how bushy is the path? [Answer indexed from 0 "very bushy" to 1 "very clear"]	0.482	-0.003	(0.034)	228	H2, H4
30	Since January 2006, has this community taken a project proposal to an external funder—like local government or NGO—for support? <i>Note that the community should have been the ones initiating the request.</i>	0.292	-0.152**	(0.052)	229	H2, H4
31	Does this community have a seed bank (i.e. where people can borrow rice or groundnuts to plant and repay after	0.170	0.17**	(0.048)	226	H2
32	[After asking the community how they have used (or plan to use) the tarp] SUPERVISOR: In your own opinion, is the tarp being used (or is there a plan to use it) in a public way (where everyone benefits) or in a private way (where only few people benefit)?	0.857	0.015	(0.051)	161	H2, H6

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
33	[Given the community redeemed vouchers and after asking the community how they have used (or plan to use) the building materials] SUPERVISOR: In your own opinion, are the building materials being used (or is there a plan to use them) in a public way (where everyone benefits) or in a private way (where only few people benefit)?	0.898	0.005	(0.064)	98	H2
34	[Given that there is a community center in the community] The money and supplies for the community center were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.808	-0.307*	(0.129)	71	H2, H4
35	[Given that there is a drying floor in the community] The money and supplies for the drying floor were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.105	-0.018	(0.074)	98	H2, H4
36	[Given that there is a grain store in the community] The money and supplies for the grain store were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.000	0.065	(0.057)	50	H2, H4
37	[Given that there is a latrine in the community] The money and supplies for the latrine were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.761	-0.191*	(0.092)	126	H2, H4
38	[Given that there is a primary school in the community] The money and supplies for the primary school were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.554	-0.031	(0.089)	124	H2, H4
39	[Given that there are any water wells in the community] The money and supplies for at least one well were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.375	-0.196*	(0.088)	109	H2, H4
40	[Given that there are any water wells in the community] The money and supplies for at least one well were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.335	0.023	(0.039)	182	H2, H4
41	[Given that there are any water wells in the community] The money and supplies for at least one well were provided by the community itself or in part from the community and part from an external source (like NGO, Government or donor)	0.449	-0.022	(0.092)	81	H2, H4
42	[Given that there is a football field or other sports facility] does the sports facility have any modern equipment (like metal goal posts or nets)?	0.000	0.016	(0.016)	153	H2
43	Supervisor summary assessment of the overall appearance of the drying floor (index from 1 = excellent to 0 = unfit for use)	0.426	0.102+	(0.057)	99	H2
44	Supervisor summary assessment of the overall appearance of the latrine (index from 1 = excellent to 0 = unfit for use)	0.417	0.060+	(0.031)	153	H2
45	Supervisor summary assessment of the overall appearance of the primary school (index from 1 = excellent to 0 = unfit for use)	0.482	0.114*	(0.045)	123	H2

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
46	Supervisor summary assessment of the overall appearance of the water source (index from 1 = excellent to 0 = unfit for use)	0.426	-0.025	(0.032)	221	H2
47	Index of supervisor physical assessment of drying floor that gives weight to the lack of cracks and the lack of water pooling in the floor.	0.375	0.158*	(0.076)	101	H2
48	Index of supervisor physical assessment of the quality of building materials used in the latrine that gives weight to non-mud floor, non-thatch roof and non-mud or thatch walls	0.270	0.176**	(0.054)	154	H2
49	Index of supervisor physical assessment of the quality of building materials used in the primary school that gives weight to non-mud floor, non-thatch roof and non-mud or thatch walls	0.583	0.106+	(0.056)	123	H2
50	Index of supervisor physical assessment of the type and cleanliness of the water source that gives weight to tap or wells, fencing, no vegetation and area not used for human waste	0.464	0.003	(0.041)	224	H2
51	Household PCA Asset/Amenities score (includes hhs ownership of bicycle, mobile phone, generator, car/truck/motorcycle, electric fan, umbrella, TV, radio/cassette player, torchlight; non-mud floor of house; non-thatch roof of house; non-mud walls of house; index of water source quality (i.e. tap/well better than river); index of toilet facility quality (i.e. latrine better than bush))	-0.170	0.310**	(0.092)	236	H3
52	Supervisor assessment that community is "much better off" or "a little better off" than other communities he/she has been to in this area	0.263	0.139*	(0.059)	231	H3
53	In the past one year, what are the top three ways you yourself have earned cash and how much cash have you earned from each activity in the past one year (in 1,000 Leones)	746.943	-28.340	(77.240)	236	H3
54	In the past 2 years (since October 2007), have you started a new business, even if it is small or informal?	0.072	0.014	(0.012)	236	H3
55	[From supervisor tour of community] Have you seen anybody selling packaged goods (cigarettes, crackers, etc) in this village today from their own home (i.e. not out of a store)?	0.441	0.11+	(0.056)	229	H3
56	Quintile of Household PCA Asset/Amenities score	2.835	0.241**	(0.078)	236	H3
57	In the past one month, have you or anyone in your household sold any agricultural produce (or fish, livestock)?	0.507	0.000	(0.026)	236	H3
58	In the past one month, have you or anyone in your household sold any non-agricultural goods or services--like petty trading?	0.186	0.018	(0.018)	236	H3
59	Number of goods out of 10 common items (bread, soap, garri, country cloth/garra tie-dye, eggs/chickens, sheep/goats, palm oil/nut oil, coal, carpenter for hire/shop, tailor/dressmaker, blacksmith for hire/shop) that you can buy in this community today	4.449	0.566*	(0.240)	236	H3
60	How many people have started a new business (even if it is small or informal) in this community in the past 2 years (since October 2007)? [Record name, type of business and year started]	1.745	0.107	(0.315)	207	H3

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
61	How many houses and small shops (including tables, boxes and kiosks) are selling packaged goods (like cigarettes, biscuits, etc) inside this community today?	2.432	0.704*	(0.344)	225	H3
62	In the past one year, what are the top three ways you yourself have earned cash (total number of sources out of 3)	1.543	-0.017	(0.047)	236	H3
63	In the past 2 years (since October 2007), have you participated in any skills training (bookkeeping, soap-making), adult literacy (learn book) or vocation education courses (carpentry, etc.)?	0.061	0.120**	(0.018)	235	H3
64	[Given that household sold agricultural products in the past year] total Leones received last time sold rice, cassava, groundnuts, vegetables and other produce?	202.553	-2.481	(17.906)	233	H3
65	[Given that household sold agricultural produce in the last one month] have you or anyone in your household sold any agricultural produce (or fish, livestock) outside this village in the past month--i.e. in a market or to a trader outside of this village?	0.768	-0.002	(0.031)	224	H3
66	[Given farming household] the last time anyone in your household harvested rice, cassava, groundnuts, vegetables or other produce, how much of it did you sell?	0.705	0.001	(0.024)	235	H3
67	[Given that household sold non-agricultural goods or services in the last one month] did anyone in your household sell any non-agricultural goods or services (like petty trading) outside this village in the past month--i.e. in a market or to a trader outside of this village?	0.644	-0.011	(0.049)	187	H3
68	How many days did each child inside this household between the ages of 5 and 18 go to school inside the past 7	4.501	-0.040	(0.048)	235	H3
69	Community redeemed any of the 6 vouchers for building materials	0.542	-0.015	(0.060)	236	H4
70	Have you participated in road brushing or town cleaning in the past two months?	0.419	-0.015	(0.023)	236	H4
71	Number of vouchers for building materials out of 6 maximum that the community redeemed	2.949	0.060	(0.351)	236	H4
72	Does this community have any communal farms?	0.299	0.227**	(0.058)	235	H4
73	Does the primary school that children in the community attend have community teachers?	0.922	-0.059	(0.038)	232	H4
74	Do any people from different households here come together to sell agricultural goods or other petty trading as a group to markets outside of this village (i.e. heap the goods together and send one person to sell; NOT every person totes their own load)?	0.274	0.009	(0.047)	217	H4, H7, H8
75	Has anyone in this community ever used the tarp? (verified by supervisor physical assessment)	0.897	-0.079+	(0.044)	233	H4
76	[Given that community has ever used the tarp] community has used the tarp at least 10 times	0.450	-0.048	(0.061)	222	H4
77	How much money would you yourself be able to contribute to the building materials vouchers (in Leones)?	41679.531	-24200.000	(21216.535)	235	H4
78	How much money do you think the community will be able to raise to use the building materials vouchers (in Leones)?	#####	9726.013	(12843.984)	234	H4

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
79	In the past one year, did you work on a communal farm (this means a farm owned by the community where community members works on the farm)?	0.226	0.035	(0.028)	235	H4
80	[Given membership in labor sharing gang] have you contributed any money to this group in the past one month?	0.269	-0.042	(0.033)	220	H4, H8
81	[Given membership in credit or savings group] have you contributed any money to this group in the past one month?	0.920	0.000	(0.027)	195	H4, H8
82	[Given membership in school PTA] have you contributed any money to this group in the past one month?	0.593	-0.043	(0.067)	148	H4, H8
83	[Given membership in group savings for a major event (weddings, funerals) group] have you contributed any money to this group in the past one month?	0.736	-0.059	(0.068)	117	H4, H8
84	[Given membership in a social club] have you contributed any money to this group in the past one month?	0.629	-0.116	(0.080)	119	H4, H8
85	[Given has worked on communal farm] about how many days in total did you work on a communal farm in the last one month?	4.674	0.455	(0.526)	164	H4
86	[Given existence of functional community center in the community] did you contribute any labor for building or maintaining this resource?	0.574	0.192**	(0.072)	100	H4
87	[Given existence of functional drying floor in the community] did you contribute any labor for building or maintaining this resource?	0.657	0.039	(0.047)	121	H4
88	[Given existence of functional grain store in the community] did you contribute any labor for building or maintaining this resource?	0.671	0.037	(0.107)	77	H4
89	[Given membership in labor sharing gang] have you contributed any labor to this group in the past one month?	0.879	-0.008	(0.025)	221	H4, H8
90	[Given existence of functional latrine in the community] did you contribute any labor for building or maintaining this resource?	0.670	0.033	(0.044)	175	H4
91	[Given membership in credit or savings group] have you contributed any labor to this group in the past one month?	0.126	-0.041	(0.032)	194	H4, H8
92	[Given existence of functional health clinic in the community] did you contribute any labor for building or maintaining this resource?	0.677	-0.257	(0.184)	29	H4
93	[Given existence of functional primary school in the community] did you contribute any labor for building or maintaining this resource?	0.722	0.004	(0.033)	142	H4
94	[Given membership in school PTA] have you contributed any labor to this group in the past one month?	0.223	-0.030	(0.058)	150	H4, H8
95	[Given membership in group savings for a major event (weddings, funerals) group] have you contributed any labor to this group in the past one month?	0.304	-0.084	(0.067)	125	H4, H8
96	[Given membership in a social club] have you contributed any labor to this group in the past one month?	0.389	-0.008	(0.075)	123	H4, H8
97	[Given existence of functional sports field in the community] did you contribute any labor for building or maintaining this resource?	0.419	0.056+	(0.033)	182	H4

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
98	[Given existence of functional traditional birth attendant TBA house in the community] did you contribute any labor for building or maintaining this resource?	0.592	0.039	(0.106)	81	H4
99	[Given existence of functional water well in the community] did you contribute any labor for building or maintaining this resource?	0.696	-0.017	(0.037)	153	H4
100	[Given redeemed building materials vouchers] has the community brought the building materials back to the village?	0.758	-0.100	(0.073)	127	H4
101	[Given existence of functional community center in the community] did you contribute any local materials or food for building or maintaining this resource?	0.525	0.164*	(0.076)	100	H4
102	[Given existence of functional drying floor in the community] did you contribute any local materials or food for building or maintaining this resource?	0.536	0.049	(0.055)	121	H4
103	[Given existence of functional grain store in the community] did you contribute any local materials or food for building or maintaining this resource?	0.522	0.056	(0.106)	77	H4
104	[Given existence of functional latrine in the community] did you contribute any local materials or food for building or maintaining this resource?	0.551	0.054	(0.045)	175	H4
105	[Given existence of functional health clinic in the community] did you contribute any local materials or food for building or maintaining this resource?	0.595	-0.172	(0.205)	29	H4
106	[Given existence of functional primary school in the community] did you contribute any local materials or food for building or maintaining this resource?	0.654	0.020	(0.036)	142	H4
107	[Given existence of functional sports field in the community] did you contribute any local materials or food for building or maintaining this resource?	0.352	0.076*	(0.036)	184	H4
108	[Given existence of functional traditional birth attendant (TBA) house in the community] did you contribute any local materials or food for building or maintaining this resource?	0.613	-0.076	(0.114)	81	H4
109	[Given existence of functional water well in the community] did you contribute any local materials or food for building or maintaining this resource?	0.574	0.027	(0.042)	153	H4
110	[Given that community redeemed vouchers and built something with the materials] supervisor assessment of the quality of construction concerning the building materials	0.650	0.046	(0.108)	23	H4
111	[Given community teachers at the school children in the community attend and provision of some incentive] how much money in Leones will each teacher receive for this current term (third term of 2008-09 academic year)?	75837.930	13701.956	(21976.000)	103	H4
112	[Given community teachers at the school children in the community attend] are the community teachers given an incentive for their work by the community (for example: monev, food, work on their farm)?	0.854	0.005	(0.041)	198	H4
113	[Given community teachers at the school children in the community attend] were the community teachers ever trained?	0.471	0.122+	(0.066)	173	H4

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
114	[Given community redeemed vouchers] has the community begun using the building materials?	0.242	-0.021	(0.075)	124	H4
115	Enumerator record of whether public debate (opinions expressed loudly enough for all to hear) occurred during the gift choice deliberation	0.610	0.040	(0.047)	236	H5
116	In your opinion, "every person helped to decide" best describes how the community decided what to do with the vouchers	0.571	0.021	(0.029)	236	H5
117	In your opinion, "every person helped to decide" best describes how the community decided to share the [salt/batteries]	0.611	0.009	(0.025)	236	H5
118	In your opinion, "every person helped to decide" best describes how the community decided what to do with the tarp	0.596	0.030	(0.026)	236	H5
119	Enumerator account of how democratically the group eventually came to a decision about which gift to choose, ranging from 5 = open discussion followed by group vote to 1 = chief and/or elders decide without other input	3.396	-0.024	(0.102)	236	H5
120	Do any disabled people hold leadership positions in this community (like member of VDC, youth leaders, headman, women's leader, secret society head)?	0.115	0.008	(0.042)	228	H5
121	Did any disabled people (blind, polio, amputee, wheelchair, etc.) attend the last community meeting?	0.545	0.070	(0.062)	227	H5
122	Enumerator record of duration of gift choice deliberation in minutes	9.362	1.544	(1.117)	225	H5
123	Everybody in the village had equal say in deciding what to buy / do with the building materials vouchers (this includes deciding not to use them)	0.522	-0.054	(0.057)	230	H5
124	Everybody in the village had equal say in deciding how to share the [salt/batteries]	0.526	-0.086	(0.056)	233	H5
125	Everybody in the village had equal say in deciding how to use the tarp	0.509	-0.106+	(0.058)	232	H5
126	If the big ones in the community wanted salt and everyone else wanted the batteries, respondent says they think the community would get the batteries	0.352	0.029	(0.032)	236	H5
127	In your opinion, "every person helped to decide" best describes what happened at the meeting when the community had to choose between the salt and batteries	0.562	0.000	(0.032)	236	H5
128	Did you attend a meeting today about gifts from our team?	0.840	-0.019	(0.018)	236	H5, H9
129	"Everybody in the village had equal say" chosen in response to who do you think had the most say over the choice between salt and batteries	0.671	-0.043	(0.027)	236	H5, H6
130	Gift (salt versus batteries) chosen reflects the view of the majority of household's response to "would you rather have a small packet of iodized salt or a Vinnic battery for your household?"	0.958	0.002	(0.026)	236	H5
131	Was there any community meeting to decide what to buy / do with the vouchers or how to raise the funds after our team left your community (not the original gift meeting)?	0.983	-0.052*	(0.023)	231	H5
132	In the past one year, have you attended any community meetings?	0.732	0.012	(0.020)	236	H5

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
133	Was there any community meeting to decide how to share the [salt/batteries] after our team left your community (not the original gift meeting)?	0.991	0.000	(0.012)	233	H5
134	Was there any community meeting to decide how to decide what to do with the tarp after our team left your community (not the original gift meeting)?	0.983	-0.025	(0.020)	233	H5
135	Enumerator record of total adults (18+ years) present at gift choice meeting	54.508	3.570	(2.876)	236	H5
136	Enumerator record of total women (18+ years) present at gift choice meeting	24.987	1.982	(1.590)	236	H5
137	Enumerator record of total youths (18-35 years) present at gift choice meeting	23.568	2.061	(1.321)	236	H5
138	Did anyone take minutes (written record of what was said) at the most recent community meeting?	0.295	0.140*	(0.063)	227	H5
139	Did you attend any meeting to decide what to buy / do with the vouchers after our team left your community (not the original gift meeting)?	0.765	-0.051*	(0.024)	236	H5
140	Did you attend any meeting to decide how to share the [salt/batteries] after our team left your community (not the original gift meeting)?	0.846	-0.032+	(0.017)	236	H5
141	Did you attend any meeting to decide what to do with the tarp after our team left your community (not the original gift meeting)?	0.812	-0.037+	(0.021)	236	H5
142	Community has not had any problems with financial mismanagement / corruption in the past 2 years (since October 2007)	0.964	0.002	(0.024)	224	H5
143	Enumerator record of whether no group left the meeting area to have a private discussion during the gift choice deliberation	0.542	-0.014	(0.060)	236	H5
144	Enumerator record of whether no private discussion among opinion leaders within the meeting area (not loud enough for all to hear) occurred during the gift choice deliberation	0.449	0.019	(0.048)	236	H5
145	Imagine that someone from outside comes into this community, and wants to do a project. They give the community the choice between two projects. What do you think is the best thing to do? Respondent chooses "discuss together as a community until decision is reached" or "have a vote" and not "allow the village authorities to decide"	0.852	-0.002	(0.019)	236	H5, H6
146	Enumerator account of how actively women participated in the deliberation compared to men, ranging from 5 = no difference between women and men to 1 = women not active at all compared to men	2.900	-0.126	(0.128)	236	H5
147	Enumerator account of how actively youth participated in the deliberation compared to non-youth (over 35 years), ranging from 5 = no difference between youth and non-youth to 1 = youth not active at all compared to non-youth	3.003	0.025	(0.124)	236	H5
148	Respondent feels that "everybody in the village had equal say" in deciding what to do with the vouchers	0.509	0.027	(0.030)	236	H5
149	Respondent feels that "everybody in the village had equal say" in deciding how to share the [salt/batteries]	0.554	0.034	(0.028)	236	H5

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
150	Respondent feels that "everybody in the village had equal say" in deciding what to do with the tarp	0.522	0.057*	(0.029)	236	H5
151	Supervisor asks to see the tarp at second round follow-up visit: can the community show you the tarp?	0.836	-0.116*	(0.051)	232	H5
152	Enumerator record of total public speakers during gift choice meeting	6.042	0.223	(0.399)	236	H5
153	Enumerator record of total women public speakers during gift choice meeting	1.881	-0.195	(0.217)	236	H5
154	Enumerator record of total youth (18-35 years) public speakers during gift choice meeting	2.136	0.231	(0.237)	236	H5
155	Tarp is stored in a public place (community center, school/clinic, church/mosque) when it is not being used	0.060	0.054	(0.037)	225	H5
156	"Everybody in the village will have equal say" chosen in response to who do you think will have the most influence over how the tarpaulin is used	0.500	-0.031	(0.027)	236	H5, H6
157	Enumerator record of whether a vote occurred during the gift choice deliberation	0.097	0.069	(0.042)	236	H5, H6
158	[Given community redeemed vouchers and brought materials back to village] was there any public presentation of materials when they came back from the store?	0.813	0.056	(0.079)	92	H5
159	[Given private discussion among small group away from meeting] Enumerator record of how inclusive the side group was of non-opinion leaders	2.531	-0.084	(0.128)	101	H5
160	[Given worked on a communal farm in the past year] did you attend any meeting to decide what to plant on the communal farm or what to do with the harvest this year?	0.940	-0.047	(0.029)	164	H5
161	[Given membership in fishing cooperative] have you been to a meeting for this group in the past one month?	0.532	0.162	(0.143)	44	H5, H8
162	[Given membership in labor sharing gang] have you been to a meeting for this group in the past one month?	0.746	-0.008	(0.032)	221	H5, H8
163	[Given membership in credit or savings group] have you been to a meeting for this group in the past one month?	0.687	0.055	(0.045)	195	H5, H8
164	[Given membership in school PTA] have you been to a meeting for this group in the past one month?	0.710	-0.023	(0.060)	151	H5, H8
165	[Given membership in group saving for major event group] have you been to a meeting for this group in the past one month?	0.531	0.066	(0.070)	126	H5, H8
166	[Given membership in seed multiplication group] have you been to a meeting for this group in the past one month?	0.630	0.079	(0.065)	143	H5, H8
167	[Given membership in social club] have you been to a meeting for this group in the past one month?	0.684	0.042	(0.070)	126	H5, H8
168	[Given community has any community teachers] did you go to a meeting to decide what to give the teachers?	0.667	-0.001	(0.036)	194	H5
169	[Given membership in women's group] have you been to a meeting for this group in the past one month?	0.544	0.089*	(0.044)	210	H5, H8
170	[Given membership in youth group] have you been to a meeting for this group in the past one month?	0.675	-0.033	(0.040)	225	H5, H8
171	[Given the presence of a functional community center] did you attend any meeting about the planning, construction or maintenance of this resource?	0.601	0.214**	(0.067)	100	H5

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
172	[Given the presence of a functional drying floor] did you attend any meeting about the planning, construction or maintenance of this resource?	0.676	0.070	(0.048)	121	H5
173	[Given the presence of a functional grain store] did you attend any meeting about the planning, construction or maintenance of this resource?	0.740	-0.023	(0.087)	77	H5
174	[Given the presence of a functional latrine] did you attend any meeting about the planning, construction or maintenance of this resource?	0.592	0.032	(0.044)	175	H5
175	[Given the presence of a functional health clinic] did you attend any meeting about the planning, construction or maintenance of this resource?	0.668	-0.166	(0.197)	30	H5
176	[Given the presence of a functional primary school] did you attend any meeting about the planning, construction or maintenance of this resource?	0.762	0.009	(0.031)	142	H5
177	[Given the presence of a functional sports field] did you attend any meeting about the planning, construction or maintenance of this resource?	0.576	0.018	(0.039)	182	H5
178	[Given the presence of a functional traditional birth attendant (TBA) house] did you attend any meeting about the planning, construction or maintenance of this resource?	0.564	0.14	(0.106)	81	H5
179	[Given the presence of a functional water well] did you attend any meeting about the planning, construction or maintenance of this resource?	0.734	0.001	(0.038)	153	H5
180	[Given private discussion among small group away from meeting] Enumerator record of the proportion of group that is women and youth	0.929	-0.070	(0.093)	107	H5
181	[Given community redeemed any vouchers] community is able to show the supervisor the receipt from the building materials store	0.403	0.058	(0.087)	127	H5
182	[Given community redeemed any vouchers] was there any public presentation of the materials when they came back from the store?	0.333	-0.103	(0.083)	128	H5
183	[Given community redeemed any vouchers] Supervisor asks to see the building materials at second round follow-up visit: can the community show you the materials?	0.632	-0.116	(0.081)	136	H5
184	[Given attended meeting to decide what to buy / do with the vouchers] did you speak publicly during the voucher meeting (meaning that you said something that everyone in the meeting could hear, not just your neighbor)?	0.482	0.023	(0.023)	235	H5
185	[Given attended community meeting in past year] did you make any speeches, comments or suggestions publicly during the last community meeting you attended?	0.506	-0.010	(0.025)	236	H5
186	[Given attended meeting about the communal farm] did you make any speeches, comments or suggestions publicly during that meeting?	0.687	-0.044	(0.048)	160	H5
187	[Given attended meeting to decide what to do with the salt/batteries] did you speak publicly during the salt/batteries meeting (meaning that you said something that everyone in the meeting could hear, not just your neighbor)?	0.514	-0.002	(0.021)	236	H5

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
188	[Given attended meeting to decide what to do with the tarp] did you speak publicly during the tarp meeting (meaning that you said something that everyone in the meeting could hear, not just your neighbor)?	0.503	-0.018	(0.023)	236	H5
189	[Given attended a meeting to decide what to give the community teachers] did you make any speeches, comments or suggestions publicly during this meeting about what to give them?	0.691	0.005	(0.041)	185	H5
190	[Given community redeemed vouchers and brought materials back to village] materials are stored in a public place (community center, school/clinic, church/mosque) when they are not being used	0.128	0.246*	(0.098)	84	H5
191	Enumerator report that chief and/or elders did not decide between the salt and batteries with little or no input from other members of the community	0.932	0.011	(0.031)	236	H6
192	Respondent thinks non-chiefdom and non-elders had the most say in over the choice between salt and batteries	0.689	-0.043	(0.026)	236	H6
193	Respondent agrees with "Women can be good politicians and should be encouraged to stand in elections" and not "Women should stay at home to take care of their kids"	0.727	0.025	(0.019)	236	H6, H12
194	Respondent agrees with "Responsible young people can be good leaders" and not "Only older people are mature enough to be leaders"	0.762	0.038*	(0.017)	236	H6, H12
195	Relative view of "do you think the Local Council [as opposed to Paramount chief] listens to what people in this town/neighborhood say or what they need?"	-0.232	0.068*	(0.028)	235	H6
196	Village focus group does not choose a chiefdom official or elder in response to "who had the most influence over what to do with the building material vouchers (this includes deciding not to use them)?"	0.583	-0.047	(0.058)	230	H6
197	Village focus group does not choose a chiefdom official or elder in response to "who had the most influence over how to share the [salt/batteries]?"	0.595	-0.071	(0.059)	233	H6
198	Village focus group does not choose a chiefdom official or elder in response to "who had the most influence over hoe the tarpaulin is used or whether to keep it in storage?"	0.569	-0.076	(0.060)	232	H6
199	In your opinion, "the chief decided" does not best describe how the community decided what to do with the vouchers / how to raise money / what to buy at the store (this includes deciding not to use them)	0.909	-0.001	(0.018)	236	H6
200	In your opinion, "the chief decided" does not best describe how the community decided how to share the [salt/batteries]	0.896	0.005	(0.014)	236	H6
201	In your opinion, "the chief decided" does not best describe how the community decided to use the tarp	0.898	0.010	(0.015)	236	H6
202	Respondent does not choose a chiefdom official or elder in response to "who had the most influence over what to do with the building material vouchers (this includes deciding not to use them)?"	0.524	0.043	(0.029)	236	H6
203	Respondent does not choose a chiefdom official or elder in response to "who had the most influence over how to share the [salt/batteries]?"	0.574	0.035	(0.027)	236	H6

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
204	Respondent does not choose a chiefdom official or elder in response to "who had the most influence over hoe the tarpaulin is used or whether to keep it in storage?"	0.543	0.058*	(0.029)	236	H6
205	Respondent agrees with "As citizens, we should be more active in questioning the actions of leaders" and not "In our country these days, we should have more respect for authority"	0.526	0.021	(0.023)	236	H6
206	Respondent has never gone to a traditional court (village headman court, section chief's court, local court, paramount chief's court) for help in resolving a dispute	0.686	0.006	(0.019)	236	H6
207	Relative view of "if the Local Council [as opposed to Paramount chief] was given 500 million Leones to complete a project in this area, do you believe they would spend all the money doing a good job on the project or would they cut some of the money?"	-0.085	0.023	(0.026)	230	H6
208	[Given that respondent chooses private residence as the best place to store the tarp] tarp not stored at chiefdom or elder's house	0.058	0.006	(0.012)	236	H6
209	Relative view of "do you believe" Local Councilors as opposed to Chiefdom officials	-0.127	-0.011	(0.025)	236	H6
210	Village focus group says tarp is not stored in chief's private residence	0.305	0.138*	(0.062)	236	H6
211	[Given redeemed vouchers and brough materials back to village] village focus group says materials not stored in chief's private residence	0.510	0.232*	(0.103)	95	H6
212	[Given redeemed vouchers] Village focus group says people who were not chiefdom officials went to the building materials store on behalf of the community	0.561	-0.051	(0.090)	128	H6
213	[Given some community teachers] respondent says it was not a traditional authority who had the most influence in determining how much to pay the community teachers	0.870	-0.075	(0.051)	190	H6
214	[Given some community teachers] respondent says that if a household who was supposed to contribute did not give anything for the community teachers, community did not report them to the chief or take them to the Paramount chief court	0.549	-0.009	(0.067)	195	H6
215	Tomorrow, if you needed to buy something from town or the market but were unable to travel there, would you give your money to someone from the community (not a household member) to buy the item for you?	0.942	0.009	(0.009)	236	H7
216	Suppose you were at a community meeting and you accidentally left your purse/wallet/some money on the bench. If you go back to get it one hour later, will it still be	0.259	-0.019	(0.018)	236	H7
217	Are you a member of any credit or savings (osusu) groups?	0.228	0.020	(0.022)	236	H7
218	Have you ever given money to a nonhousehold member to buy something for you at town/market?	0.929	0.015	(0.010)	236	H7
219	In your opinion, do you believe central government officials or do you have to be careful when dealing with them?	0.432	0.014	(0.026)	236	H7
220	In your opinion, do you believe chiefdom officials or do you have to be careful when dealing with them?	0.506	0.013	(0.024)	236	H7

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
221	In your opinion, do you believe Local Councillors or do you have to be careful when dealing with them?	0.388	0.009	(0.026)	236	H7
222	In your opinion, do you believe NGOs / donor projects or do you have to be careful when dealing with them?	0.631	0.054*	(0.025)	236	H7
223	In your opinion, do you believe people from outside your own village / town / neighborhood or do you have to be careful when dealing with them?	0.396	-0.022	(0.019)	236	H7
224	In your opinion, do you believe people from your own village / town / neighborhood or do you have to be careful when dealing with them?	0.848	-0.015	(0.016)	236	H7
225	[Given that has ever left some money somewhere in the village] did you get your money back?	0.352	-0.039	(0.030)	234	H7
226	Are there any fishing groups / cooperatives in this community?	0.186	0.017	(0.041)	228	H8
227	Are you a member of any fishing groups or cooperatives?	0.030	-0.002	(0.009)	236	H8
228	Are you a member of any labor sharing groups?	0.486	-0.009	(0.024)	236	H8
229	Are you a member of any school PTA groups?	0.188	-0.042+	(0.022)	236	H8
230	Are you a member of any group saving for special events (weddings, funerals) groups?	0.121	0.003	(0.015)	236	H8
231	Are you a member of any seed multiplication groups?	0.108	0.032+	(0.017)	236	H8
232	Are you a member of any social clubs?	0.091	-0.001	(0.013)	236	H8
233	Are you a member of any women's groups (general)?	0.235	0.060**	(0.021)	236	H8
234	Are you a member of any youth groups (general)?	0.344	0.003	(0.021)	236	H8
235	In the past year, have you helped someone from the community (non-household member) to re-thatch their roof?	0.312	-0.027	(0.023)	236	H8
236	[Given membership in fishing cooperative] have you contributed any money to this group in the past one month?	0.437	-0.111	(0.175)	44	H8
237	[Given membership in seed multiplication group] have you contributed any money to this group in the past one month?	0.189	0.062	(0.061)	144	H8
238	[Given membership in women's group] have you contributed any money to this group in the past one month?	0.347	-0.026	(0.045)	210	H8
239	[Given membership in youth group] have you contributed any money to this group in the past one month?	0.337	-0.015	(0.042)	225	H8
240	[Given membership in fishing cooperative] have you contributed any labor to this group in the past one month?	0.516	0.136	(0.110)	44	H8
241	[Given membership in seed multiplication group] have you contributed any labor to this group in the past one month?	0.639	0.060	(0.063)	144	H8
242	[Given membership in women's group] have you contributed any labor to this group in the past one month?	0.655	-0.053	(0.043)	209	H8
243	[Given membership in youth group] have you contributed any labor to this group in the past one month?	0.680	0.036	(0.036)	225	H8
244	[Given that you needed to re-thatch a roof at home in the past year] did anyone from the community (non-household member) help you re-thatch your roof/	0.719	0.000	(0.043)	204	H8
245	Supervisor assessment of whether there are any of the following items--awareness campaigns, financial information, development plan, minutes from any meetings, government policies, election information--visible anywhere around the village (i.e. on a notice board, school, clinic, shon. etc.)?	0.138	0.010	(0.020)	218	H9

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
246	Can you tell me which gift was chosen?	0.899	-0.010	(0.014)	236	H9
247	Can you tell me what were the two choices of gift presented to the community?	0.889	-0.010	(0.015)	236	H9
248	You may remember that during our last visit we left some gifts with this community as a thank you for helping us with our research. Can you tell me what those gifts were? (out of 3)	2.611	-0.031	(0.026)	236	H9
249	Correctly able to name what the tarp was used for or what the community's plan is for using the tarp	0.589	-0.08+	(0.048)	236	H9
250	Correctly able to name the whether or not the community redeemed any vouchers	0.814	-0.058+	(0.030)	236	H9
251	Correctly able to name the Chairperson of the Local Council	0.081	0.018	(0.012)	236	H9
252	Correctly able to name the year of the next general elections	0.192	0.038*	(0.018)	236	H9
253	Correctly able to name the Local Councillor from their ward	0.384	0.012	(0.033)	236	H9
254	Correctly able to name the Paramount Chief for this chiefdom	0.680	-0.001	(0.023)	234	H9
255	Able to name a type and location of a Local Council project	0.080	0.003	(0.014)	236	H9
256	Correctly able to name the Section Chief for this section	0.533	0.053+	(0.032)	234	H9
257	Correctly able to name the amount adults are supposed to pay in Local Tax	0.925	-0.003	(0.011)	236	H9
258	Do you get information from the radio about politics and what the government is doing?	0.655	0.018	(0.020)	236	H9
259	Correctly able to name whether or not the community has used the tarp	0.754	-0.042	(0.037)	233	H9
260	Has this community been visited by the Paramount Chief in the past year?	0.161	0.058	(0.048)	236	H9
261	[Given community redeemed vouchers] Correctly able to name total vouchers redeemed, total cash contributed, who went to the building materials store on behalf of the community and materials purchased; and confirmed that they saw the materials upon arrival and the receipt from the store	3.582	-0.141	(0.235)	126	H9
262	[Given household member has paid market dues in the past year] able to correctly name authority who spends the market dues	0.440	0.035	(0.047)	183	H9
263	Respondent thinks they have "some" or "little" as opposed to "no" chance to change an unjust chiefdom law (for example, if the chief asks everyone to contribute 3 bushels or rice and you think this is too much, do you think you could get the chief to change the policy to only 1 bushel)?	0.511	0.002	(0.022)	236	H10
264	Respondent thinks they have "some" or "little" as opposed to "no" chance to change an unjust local government policy (for example, if the Local Council asks everyone to contribute 3 bushels or rice and you think this is too much, do you think you could get the Council to change the policy to only 1 bushel)?	0.522	-0.023	(0.022)	236	H10
265	Do you think the Local Council listens to what people in this town / neighborhood say or what they need?	0.295	0.050*	(0.022)	236	H10
266	How often do you discuss politics or the government with someone from the community, like a friend or a member of your household, ranging from 5 = everyday to 1 = never	2.067	0.039	(0.033)	236	H10

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
267	Did anyone in this community contest the party symbol in the 2008 local council elections?	0.127	-0.036	(0.036)	236	H10
268	Did anyone in this community stand for the most recent paramount chief elections?	0.119	0.019	(0.043)	235	H10
269	Did anyone in this community stand for the most recent section chief elections?	0.280	0.032	(0.056)	236	H10
270	Did anyone in this community stand for the most recent Ward Development Committee elections or get nominated for WDC?	0.259	0.060	(0.0550)	231	H10
271	Did you vote in the local government election (2008)?	0.851	-0.036*	(0.016)	236	H10
272	Did you vote in the first round of the last presidential general election (2007)?	0.963	-0.009	(0.007)	236	H10
273	Did you vote in the second round (run-off) presidential election (2007)?	0.933	-0.007	(0.010)	236	H10
274	[Given functional community center in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this community center?	0.555	0.144*	(0.069)	97	H10
275	[Given functional drying floor in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this drying floor?	0.476	0.081	(0.063)	118	H10
276	[Given functional grain store in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this grain store?	0.398	0.116	(0.102)	74	H10
277	[Given functional latrine in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this latrine?	0.395	0.077+	(0.045)	170	H10
278	[Given functional health clinic in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this PHU?	0.803	-0.219	(0.167)	27	H10
279	[Given functional primary school in the community] Was a member of the the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this primary school?	0.610	0.103+	(0.053)	139	H10
280	[Given functional football/sports field in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this football/sports field?	0.363	0.056	(0.051)	183	H10
281	[Given functional traditional birth attendant (TBA) house in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this TBA house?	0.608	-0.053	(0.102)	76	H10
282	[Given functional water well in the community] Was the Section Chief or Paramount Chief directly involved in the planning, construction, maintenance or oversight of this well?	0.572	0.033	(0.051)	152	H10
283	Proportion of female members of the VDC	0.209	0.066+	(0.037)	151	H10
284	Proportion of female or youth members of the VDC	0.426	0.004	(0.044)	151	H10

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
285	Proportion of youth members of the VDC	0.258	-0.043	(0.040)	151	H10
286	[Given has a village development plan and redeemed vouchers] does the building materials project/plan relate to something inside the VDP or is it a new project not in the plan?	0.765	-0.059	(0.086)	130	H10
287	[Given has a village development plan] does the tarp project/plan relate to something inside the VDP or is it a new project not in the plan?	0.524	-0.041	(0.082)	161	H10
288	[Given has a village development plan] is the VDP written down anywhere?	0.403	0.246**	(0.078)	170	H10
289	Enumerator verifies that respondent's voter ID card has the correct hole punched indicating a vote in the local council elections	0.619	-0.031	(0.024)	236	H10
290	Enumerator verifies that respondent's voter ID card has the correct hole punched indicating a vote in the first round presidential elections	0.726	0.001	(0.020)	236	H10
291	Enumerator verifies that respondent's voter ID card has the correct hole punched indicating a vote in the second round presidential elections	0.710	-0.008	(0.020)	236	H10
292	[Given not a member of the VDC] would you like to be a member of the VDC?	0.361	-0.043*	(0.021)	236	H10
293	No conflict that respondent needed help from someone outside the household to resolve in the past one year	0.831	0.015	(0.016)	236	H11
294	In the past 12 months, respondent has not been involved in any physical fighting	0.970	0.014*	(0.006)	236	H11
295	In the past 12 months, no livestock, household items or money stolen from the respondent	0.618	-0.004	(0.022)	236	H11
296	During the last 12 months, respondent has not been a victim of witchcraft (juju)	0.989	0.000	(0.004)	236	H11
297	Respondent agrees with "Beating children will only teach them to use violence against others" and not "In order to bring up a child properly, you need to punish him / her"	0.402	0.002	(0.021)	236	H11
298	Respondent agrees with "No one has the right to use physical violence against anyone else" and not "A married man has a right to heat his wife if she misbehaves"	0.688	-0.017	(0.018)	236	H11, H12
299	No report of household member ever having a conflict with someone over a loan or other money business	0.823	-0.026+	(0.016)	236	H11
300	Respondent agrees with "The use of violence is never justified in politics" and not "It is sometimes necessary to use violence in support of a just cause"	0.681	0.001	(0.017)	236	H11
301	[Given a conflict over a loan] respondent says there was never any personal violence / fighting between self or household member and someone else	0.904	-0.022	(0.031)	199	H11
302	[Given conflict that required external assistance resolving] did not seek help from anyone outside the community	0.492	0.053	(0.049)	177	H11
303	Respondent agrees with "It's wrong to pay a bribe to any government official" and not "In our country, it's okay to pay a bribe to a government official to encourage them"	0.801	0.020	(0.014)	236	H12

Row	Survey question	Endline mean for controls	Treatment effect	Standard error	N	Hypothesis
		(1)	(2)	(3)	(4)	(5)
304	Respondent agrees with "No one should be forced to do something they don't want to do" and not "It is OK for local leaders to have the right to force people to work for the community"	0.589	-0.009	(0.020)	236	H12
305	Respondent agrees with "Responsible people can be good local leaders even if they are not from this community" and not "Only people who have lived here for a long time know enough about this community to be good leaders"	0.593	0.006	(0.020)	236	H12
306	Is the current (or acting) village chief/Headman a woman?	0.035	0.025	(0.026)	229	H12
307	Is the current (or acting) village chief/Headman less than 35 years old?	0.044	-0.038	(0.023)	229	H12
308	Respondent agrees with "In this community, elders / authorities treat youths justly and with respect" and not "In this community, the way elders / authorities treat youths is not always right"	0.754	0.001	(0.020)	236	H12
309	[Given presence of communal farm] both youths and non-youths work on the farm	0.700	-0.086	(0.072)	97	H12
310	[Given presence of communal farm] children do not work on the farm	0.286	-0.083	(0.076)	97	H12
311	[Given presence of communal farm] both men and women work on the farm	0.643	-0.020	(0.094)	97	H12
312	[Given presence of communal farm] people of different tribes work on the farm	0.300	-0.046	(0.094)	97	H12
313	[Given membership in group savings for major event] index of whether group contains both genders, youth and non-youths, and different ethnic groups	0.695	0.010	(0.033)	129	H12
314	[Given membership in labor sharing gang] index of whether group contains both genders, youth and non-youths, and different ethnic groups	0.449	0.002	(0.022)	221	H12
315	[Given membership in credit/savings group] index of whether group contains both genders, youth and non-youths, and different ethnic groups	0.604	0.034	(0.028)	197	H12
316	[Given current chief chosen since 2005] Is the current (or acting) village chief/Headman a woman?	0.067	0.090	(0.099)	64	H12
317	[Given current chief chosen since 2005] Is the current (or acting) village chief/Headman less than 35 years old?	0.103	-0.108	(0.070)	64	H12
318	[Given membership in social club] index of whether group contains both genders, youth and non-youths, and different ethnic groups	0.608	0.010	(0.046)	125	H12

Notes on table: i) significance levels indicated by + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$; ii) robust standard errors; iii) treatment effect estimates run on post-program follow-up data under minimal specification that includes only fixed effects for the district council wards (the unit of stratification) and the two balancing variables from the randomization (total households and distance to road); and iv) a small number of conditional outcomes from the *ex ante* analysis plan were dropped as they contained insufficient observations for analysis (for example, only 5 communities contained a market so treatment effects on community contributions to the market could not be estimated with the standard set of

NOT INTENDED FOR PUBLICATION
Appendix H: Summary of Treatment Effect Heterogeneity

Hypotheses by family	GoBifo Mean Effect (std. error)	Interaction of GoBifo Treatment Indicator with:					
		Community size (std.error)	Index of war exposure (std.error)	Average respondent schooling (std.error)	Distance to motorable road (std.error)	History of domestic slavery (std.error)	Bombali district (std.error)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Family A: Development Infrastructure Impacts or "Hardware" Effects (Hypotheses 2 and 3; 30 total outcomes)	0.793** (0.132)	-0.000 (0.001)	-0.198 (0.183)	-0.023 (0.026)	-0.010 (0.011)	-0.174* (0.069)	-0.215** (0.063)
Family B: Institutional and Social Change or "Software" Effects (Hypotheses 4, 5, 6, 7, 8, 9, 10, 11 and 12; 146 total outcomes)	0.097 (0.095)	-0.001 (0.001)	-0.081 (0.114)	0.014 (0.015)	-0.004 (0.007)	-0.025 (0.044)	0.040 (0.042)

Notes on table: i) significance levels indicated by + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$; ii) robust standard errors; iii) includes fixed effects for the district council wards (the unit of stratification) and the following control variables: total households per community, distance to nearest motorable road, index of war exposure, index of history of domestic slavery, and average respondent years of school, plus all of these control variables--and the district dummy variable--interacted with the GoBifo treatment dummy; and iv) these mean effect estimates are limited to the full sample set of outcomes that excludes all conditional outcomes (i.e. those that depend on the state of another variable--for example, quality of infrastructure depends on the existence of the infrastructure) and are run on the post-program data.