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Why pay NGOs to involve the community?

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Why Pay NGOs to Involve the Community?

Ronelle Burger\textsuperscript{a}, Indraneel Dasgupta\textsuperscript{b} and Trudy Owens\textsuperscript{c}

Abstract:
We examine the case for donors providing financial incentives to NGOs to increase community participation. We show that, when such incentives are provided, there need not exist any meaningful relationship between beneficiary welfare and the extent of community participation implemented by an NGO. Higher community participation is consistent even with reduced beneficiary welfare. Thus, eliminating community participation from the set of conditions for funding an NGO may improve beneficiary welfare. We provide evidence from the NGO sector in Uganda consistent with our theoretical conclusions. Beneficiaries themselves do not appear to perceive community participation as generating appreciable value-addition in project output.

Keywords: Regulation of non-governmental organizations, developing countries, community participation, Uganda

JEL Classification Numbers: I38, L31, L38

Centre for Research in Economic Development and International Trade, University of Nottingham
Why Pay NGOs to Involve the Community?

Ronelle Burger\textsuperscript{a}, Indraneel Dasgupta\textsuperscript{b} and Trudy Owens\textsuperscript{c}

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2. Theoretical Framework
3. Empirics
4. Conclusion

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Acknowledgements
1. Introduction

Community participation is often celebrated in the popular as well as academic discourse, and is widely viewed as a requirement for successful poverty-relief projects. Indeed, community-based development has arguably become a “central tenant of development policy” (Mansuri and Rao, 2012: ix). Botchway notes that participation is often assumed to be “good by definition” (2001: 135) and the term has gained “unprecedented visibility and respectability” (2001:148), often represented as the “magical missing ingredient” (2001:149) for development projects.

The concept proceeds from the premise that permanent improvements in living standards are seldom attainable without the involvement and cooperation of beneficiaries. De Berry (1999) suggests that the participatory approach “credits people with the ability, even in the most extreme circumstances, to engage with the issues that face them”. Accordingly, the beneficiary is to be given more information, responsibility and decision-making power in diverse project areas, including its focus, the targeting of beneficiaries, the implementation strategy, and assessment.

While the approach is widely considered best practice, it is not clear that it deserves these accolades. Evidence on its performance is scant, and there exists a lack of thorough and systematic evaluations with counterfactuals.1 The empirical literature on community participation acknowledges that there may be a large gap between the idealized textbook representation of the concept and non-profit organizations’ experiences with it. Case studies show that, for a variety of reasons, textbook benefits do not always materialize.

At an a priori conceptual level, the difficulty is obvious. Participatory processes are known to be expensive, demanding and time-intensive. Thus, even if one acknowledges the

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1 See Mansuri and Rao (2012) for a detailed discussion. There are many case study reports, but because case studies are based on small samples that are not representative, they cannot be used to shape policy and to inform best practices (Isham et al., 1995). There are only a few larger sample studies examining participation on infrastructure projects. These find that there are demonstrated benefits to the community participation approach (Isham et al., 1995; Isham and Kahkohnen, 2002; Khwaja, 2004). Isham et al. (1995) examine data from 121 rural water projects and find that community participation improves project outcomes. Examining 123 infrastructure projects in the north of Pakistan, Khwaja (2004) finds a positive role for participation, but only for non-technical decisions. Although causality is not conclusive, both of these studies go to some length to argue that the most
possibility of significant gains from community participation *per se*, there remains the basic economic issue of the opportunity cost of allocating greater resources to ensuring participation, in terms of forgone allocation to other items relevant for beneficiary welfare. Donors' can only ensure greater community participation on the part of non-governmental organizations (NGOs), who are typically the implementing agencies for development projects at the ground level, by using their financial leverage. The very use of their financial leverage by donors, however, is likely to distort the incentives facing NGOs. There is no *a priori* reason why such distortion may, in general, be expected to improve beneficiary welfare.  

The purpose of this paper is to develop this intuition, regarding the ambiguous nature of the relationship between the donor emphasis on community participation and beneficiary welfare, at both theoretical and empirical levels. Using a representative sample of non-profit organisations in Uganda, it examines whether community participation has a discernible impact on project outcomes, while controlling for other influences. As already discussed, the policy importance of our analysis is rooted in the high monetary costs of implementing community participation, which diverts resources from alternative uses relevant for project outcomes.  

Uganda is an interesting case to consider in this regard. The country has a long history of self-help organisations dating from pre-colonial society, where strong networks existed among clans and family members. However, after independence, most of these grassroots self-help organisations were either centralised or wiped out by the government in power. Conditions for NGOs improved dramatically when Yoweri Museveni came to power in 1986. Under Museveni’s more tolerant regime, the NGO sector expanded rapidly, with growth partly being fuelled by a significant rise in unemployment, which helped to boost the attractiveness of starting an NGO (see Nyangabyaki *et al.*, 2004).  

In Section 2 below, we set up a simple theoretical framework to motivate and organize our subsequent empirical investigation. We consider a population of NGOs, which differ in the weight put on own (retained) profit, relative to beneficiary welfare. Beneficiary welfare depends positively on both community participation and actual project expenditure (which is a monetary aggregate of all other inputs that improve the well-being of intended  

plausible direction of causality is that participation influences outcome. Isham and Kahkohnen (2002) report that effective participation is reliant on a community’s ability to organize and mobilize itself.  

2 There is the additional issue of internal conflicts of interest within beneficiary communities. While the literature often exhibits a tendency to romanticize poor communities as internally undifferentiated entities easily capable of articulating common interest and exhibiting common agency, the reality of power and identity schisms within such communities may make collective decisions/actions incoherent, inefficient or normatively problematic. We abstract from the political economy of internal decision-making within poor communities in this paper.
beneficiaries). Donors incentivize costly community participation by providing a payment under this head, which increases with the extent of participation. We assume that the net monetary benefit to NGOs is non-decreasing in the extent of community participation. We show that the following holds under this assumption. More venal NGOs will implement at least as much community participation as less venal ones, even though beneficiary welfare is monotonically decreasing in the venality of NGOs beyond a threshold, and constant below it. Furthermore, converting such a participation-incentivizing payment schedule to a (balanced budget) lump-sum grant may increase beneficiary welfare. Thus, our theoretical analysis leads us to expect the absence of any kind of meaningful relationship between the extent of community participation and the level of beneficiary satisfaction in general.

We proceed to empirically test this conclusion, using data from Uganda. Our empirical analysis is presented in Section 3. Consistent with our theoretical analysis, we find no evidence of community participation having a net positive impact on the welfare of beneficiaries, as perceived by the beneficiaries themselves. The final section draws conclusions.

2. The theoretical framework

Consider an NGO which receives funds from a donor to implement some developmental project. Let $\pi$ represent the payoff to the NGO, and let $[b(p) + v(e)]$ represent the gain to beneficiaries in the target community, where $p$ measures the level of community participation and $e$ is the actual expenditure by the NGO on the project. Assume $\nu' > 0, b'' > 0, v'' < 0$, and $\lim_{p \to 0} b'(p) = \infty, \lim_{e \to 0} v'(e) = \infty$. The NGO has a budget, $R = \rho + r(p)$, where $\rho \geq 0$ is some lump-sum payment to the NGO by donors and $r(p)$ represents NGO revenues conditional on ensuring community participation, $r'(p) > 0, r''(p) \leq 0, r(0) = 0$. The NGO has to spend some amount $c(p)$ on ensuring participation, $c'(p) > 0, c''(p) \geq 0, c(0) = 0$. Net monetary benefit from community participation to the NGO is therefore given by:

$$N(p) \equiv \rho + r(p) - c(p).$$  

(1)

Evidently, $N(0) = \rho, N'(p) \leq 0$. We assume that the net monetary benefit is non-decreasing in the extent of community participation; i.e., $N'(p) \geq 0$.

Let $\theta \in [0, \Theta]$ be a cupidity parameter representing the relative weight put by the NGO on retained profit, $m$. Thus, the NGO's utility is given by:
$$\pi = b(p) + v(e) + \theta m; \quad (2)$$

The NGO maximizes its utility specified by (2), subject to the budget constraint:

$$\rho + r(p) = m + e + c(p). \quad (3)$$

Rewriting (2) using (1) and (3), we have:

$$\pi = b(p) + v(N(p) - m) + \theta m. \quad (4)$$

From (4), we have:

$$\frac{\partial \pi}{\partial p} = b'(p) + N'(p)v'(e), \quad (5)$$

$$\frac{\partial \pi}{\partial m} = \theta - v'(e). \quad (6)$$

In turn, (5) and (6) yield:

$$\frac{\partial^2 \pi}{\partial p^2} = b''(p) + N''(p)v'(e)' + (N'(p))^2v''(e); \quad (7)$$

$$\frac{\partial^2 \pi}{\partial m^2} = v''(e). \quad (8)$$

Since: $N'' \leq 0, b'' < 0, v' > 0, v'' < 0,$ from (7) and (8), we have: $\frac{\partial^2 \pi}{\partial p^2}, \frac{\partial^2 \pi}{\partial m^2} < 0.$ Then, given any positive spending on beneficiaries, an interior solution must exist, so that, from (5):

$$b'(p) = -N'(p)v'(e). \quad (9)$$

For low values of $\theta$, $m = 0$, whereas, for values of $\theta$ above some positive threshold value $\underline{\theta}$, $m > 0$. For such cases, using (6), we have:

$$\theta = v'(e). \quad (10)$$

For all NGOs with $\theta \leq \underline{\theta}$, therefore, combining (9) and (10), we must have:

$$b'(p) = -N'(p)v'(N(p)) = -N'(p)\theta. \quad (11)$$

while, for all NGOs with $\theta > \underline{\theta}$, we have:

$$b'(p) = -N'(p)\theta. \quad (12)$$

Using (12), for $\theta > \underline{\theta}$, we get:

$$[b''(p) + \theta N'(p)] \frac{\partial \pi}{\partial \theta} = -N'(p). \quad (13)$$
Thus, since \( b''(p) < 0, N''(p) \leq 0, N'(p) \geq 0 \), we have: \([\text{for } \theta > \underline{\theta}, \frac{\partial p}{\partial \theta} \geq 0]\).

As \( \theta \) rises beyond \( \underline{\theta} \), \( v'(e) \) must rise (recall (10)), so that project expenditure must fall. However, since, by assumption, \( v'(e) > 0 \) and \( N'(p) \geq 0 \), \( b'(p) \) must be non-positive in equilibrium (recall (9)). Hence, \( b'(p) \) cannot rise, i.e., \( p \) cannot fall, as \( \theta \) rises. Summarizing, we thus have the following.

**Observation 1.** NGOs who put a higher weight on retained profit will implement at least as much community participation as those who put a lower weight, even though, above \( \underline{\theta} \), beneficiary welfare is monotonically decreasing in the weight put on retained profit.

These findings are illustrated in Figure 1 below.

**FIGURE 1 HERE**

Under the assumption that the marginal net monetary return to NGOs from community participation is positive (i.e., \( N'(p) > 0 \)), the schedules ABC and DEF illustrate, respectively, how the levels of community participation (\( p \)) and beneficiary welfare (\( b + v \)) change with changes in the level of NGO cupidity (\( \theta \)).

All NGOs will reduce community participation if they are given a lump-sum instead, so that their total income (\( \rho + \tau(p) \)) remains constant. Altruistic NGOs (those with cupidity below \( \underline{\theta} \)) will equate the marginal benefit of community participation with its marginal cost: community participation will fall even as project expenditure increases. Highly altruistic NGOs (those with cupidity sufficiently below \( \underline{\theta} \)) will continue to spend nothing on own consumption, while those with cupidity levels close to \( \underline{\theta} \) will now come to divert positive amounts to own consumption. Venal NGOs (those with cupidity above \( \underline{\theta} \)) will not change their monetary expenditure on projects (recall (10)), but equate marginal benefit of participation with marginal cost (recall (12)). This will reduce beneficiary participation. Within the class of NGOs which divert positive amounts to their own consumption, the degree of participation must now fall monotonically as the degree of cupidity (\( \theta \)) increases. Since, in this class, project expenditure must also fall monotonically, beneficiary welfare will
fall monotonically as the degree of cupidity increases, as in the benchmark case with participation subsidy discussed earlier (recall Observation 1).

Consider now the case of constant marginal cost of participation, $c$, and constant marginal payment for participation, $r$. Let $r > c \geq 0$. Recall that, in the benchmark model, by (9), we must then have $b'(p) < 0$ in equilibrium. Consider a policy shift to a lump-sum subsidy on part of the donor, which keeps the real income of every NGO constant, irrespective of its type ($\theta$). First notice that, when $c = 0$, this policy shift must induce every NGO, regardless of its degree of cupidity ($\theta$), to improve the well-being of beneficiaries. This happens because, while the shift cannot reduce project expenditure, it will reduce community participation to the level where $b'(p) = 0$; since $b'(p) < 0$ in the benchmark equilibrium, $b(p)$ must therefore increase. By continuity, then, we have the following.

**Observation 2.** Let $r(p) = rp, c(p) = cp, r > c \geq 0$. Then there exists $\epsilon > 0$ such that, relative to the case with participation subsidy, an identical lump-sum payment to the NGO necessarily improves beneficiary well-being when $c \in [0, \epsilon)$.

Observation 1 implies that incentivizing NGOs to increase community participation leads to strategic responses on their part, which render it illegitimate to infer higher community welfare from observations of greater community participation. Observation 2 implies that withdrawing such incentives and replacing them by a balanced budget lump-sum transfer to NGOs may reduce community participation, but nevertheless increase beneficiary satisfaction. In either case, our results provide a priori reasons not to expect any kind of meaningful or policy relevant association between beneficiary welfare and the level of community participation in general. This is the hypothesis that we now proceed to empirically investigate.

### 3. Empirics

**3.1. Data**

We use data from a representative 2002 survey of the Ugandan NGO sector, which incorporates two modules: (i) an NGO questionnaire to collect information on the organization’s structure, finances and activities, and (ii) a community focus group interview to explore how the organisation is perceived by community members. By capturing both
community perceptions and organizational characteristics, the survey enables researchers to postulate links between community perceptions, such as the value added by the organization, and self-reported organizational features such as the organization’s size and its skilled workforce.

The first survey module (NGO questionnaire) has a sample of 298 observations. The Ugandan register of non-governmental organisations was used to construct the sampling frame. It has 255 questions covering funding, ownership, expenditure, assets and governance.

The data was captured at an organizational level and not at a project level. Some organizations claimed not to have financial information available, and in other cases, where the information was available, the book-keeping system appeared to be unreliable. Due to the intricate accounting practices involved in allocating overheads to projects, it is expected that information availability and quality would have been substantially worse at a project level. It is also likely that a project-level approach may not be feasible for studying Ugandan non-profit organizations due to the lack of regard for specialization and focus within these organizations. Barr et al. (2005) find that many Ugandan NGOs seem to ‘do it all’, listing a vast array of activities and ‘focus areas’ that they are involved in. Due to the organization-level approach of the survey, the sample consequently includes a wide variety of NGO sub-sectors.

The second survey module is a community focus group. In each community visited, six to ten focus group participants were recruited via a community leader. Communities were identified by asking the NGOs surveyed to identify a number of parishes where they worked. In this way, parishes were matched to NGOs. The community focus groups collected information on the focus group members’ perceptions regarding poverty in their community, community needs, and those who help the community meet these needs. It also asked more detailed questions about the perceived contribution of one specific NGO working in the parish.

The first module of the survey (NGO questionnaire) can be matched to 207 of the 268 observations from the second module (community focus groups). There were also cases where some NGOs were linked to more than one community. To avoid problems with error terms, 28 duplicates were eliminated randomly, reducing the sample to 186 observations.

Barr et al. (2005), and Barr and Fafchamps (2004) provide more information regarding the survey questionnaire and focus group interviews respectively.
3.2. Empirical estimation strategy

There are several obstacles to evaluating the impact of community participation on development projects. It is notoriously difficult to find suitable indicators to assess the success of pro-poor development projects. Development projects often have numerous aims and objectives, and these are frequently intangible or hard to measure and have time trajectories that are unpredictable. Furthermore, it is difficult and expensive to accurately ascertain whether the community has been involved in a project’s decision-making in a substantive and meaningful way. Additionally, for results to be thoroughly convincing, it is necessary to compare a number of projects with and without community participation that are similar in all other respects, both in terms of observable and non-observable factors. The best way to ensure that projects are comparable in terms of unobservable characteristics is by randomly deciding which projects will involve the community and which will not. However, this is seldom feasible. In most cases, therefore, it becomes necessary to resort to a second-best scenario such as comparing projects with similar observable characteristics. Following this latter approach, we gauge whether community participation has a discernible impact on project outcomes after controlling for other influences.

In accordance with our theoretical model, we propose an output measure that is an indicator of the perceived utility of the project as assessed by the beneficiaries from the community. Confronted with a hypothetical scenario where the NGO was experiencing serious financial difficulty, focus group participants from the beneficiary community were asked to reach consensus on what share of a gift (represented by a pile of 100 beans) they would allocate to save the NGO in question. It was explained to community members that the gift could also be used for any other community initiative or distributed among members of the community.

The question tries to capture the perceived utility generated by the organisation, by gauging community members’ willingness to pay. Under our hypothetical scenario, willingness to pay can be separated from issues concerning the ability to pay. In the context

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3 However, some group sessions could not be matched back to the specific NGOs that they were intended to review because the NGO was not always known to the focus group. When the group members did not know the NGO, they assessed an alternate NGO, which was often not part of the sample for the first module.

4 Herman and Renz (2004) discuss the difficulties with selecting performance indicators for nonprofit organizations. It is not always clear whether performance should be judged on a program basis or organization-wide. There are often a number of distinct client and stakeholder types with competing aims and needs associated with a nonprofit organization (e.g. beneficiaries, staff members, suppliers, private sector funders, government), and it is difficult to make sense of these different voices and claims to derive a single indicator of the organization’s performance. Additionally, comparability is a concern, given the variety of activities and aims present in the nonprofit sector. One of the frequently cited objections to NGO project assessments is that less tangible, but vital project aims such as empowerment, social trust and changes in attitudes and behavior do not have predictable gestation periods.
of assessing the impact of community participation, this indicator appears to be appropriate because it may be expected to capture many of the cited transmission mechanisms for the positive influence of community participation, simultaneously representing both quantity and quality because dissatisfaction could be attributable to either. Importantly, this perceived utility measure also allows comparison across focus areas and organisation types.

We implemented a strict measure of community participation, according to which only those organisations that met all of four specified criteria were viewed as adhering to this approach. To be classified as following the participatory approach, an NGO needed to have an office in the community, democratically elect their manager, ask the community about its needs before initiating a project and require feedback from the community after completing a project.\(^5\)

In line with the theoretical framework, we estimated the cupidity parameter \(\theta_4\) by including perceived altruism – as reported on a Likert scale based on the consensus opinion of the community focus group. We also add a number of controls. Community characteristics capture demand-side factors that may influence both the community’s perceived utility and its capability to facilitate community participation, thus eliminating confounding effects that may operate through this channel. The ratio of revenue to the number of members provides an indication of the NGO’s revenue capacity relative to demand. NGO size is represented by the number of staff members. To capture heterogeneity attributable to sub-sectors and NGO ‘types’ the model includes indicator variables for specialization in micro-credit and community development and a dummy variable for whether the NGO has religious affiliation. NGO experience is represented by the years of existence of the NGO and its square. We control for the influence of the characteristics of the NGO manager by including the years of education of the manager and the manager’s years of experience in the NGO sector.

In an attempt to limit the heterogeneity of the sample, only membership organisations were included in the sample. This resulted in a loss of 33 observations, leaving only 153 of the 186 matched organisations. Due to missing values in the variables included in the regressions, the sample of the regression fell to 117 NGOs. Encouragingly, cross-tabulations of the regression sample versus the matched sample, as well as trials with imputations of the

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\(^5\) To avoid inaccuracies due to differences between what organizations say they do and what they actually do, we relied, as far as possible, on what was reported by the community. The first two dimensions came from the NGO questionnaire and the second two from the community focus group discussions. The channels for needs assessments and community feedback were assessed in both the NGO questionnaire and the beneficiary focus groups and in more than 30% of cases, there were considerable differences between what organizations claimed to have done and what communities reported.
missing values, suggest that sample selection bias did not appear to be a problem. The significance of coefficients is interpreted using a 10% level of significance as a benchmark.

3.3. Results
Due to the high degree of crowding at 1 that we see in our outcome measure (see Figure A.1.1 in Appendix 1), we also report the coefficients of an alternative model, estimated with tobit regressions. The results, reported in Table 1 below, are remarkably consistent across the four models. The coefficient of the community participation variable is large but insignificant. The analysis indicates that there is no evidence of community participation having a net positive impact on the (self) perceived utility of beneficiaries. Table 1 also shows that NGOs perceived to be more venal are associated with significantly lower levels of perceived community utility. Thus, the empirical results turn out to be consistent with our theoretical conjectures.

INSERT TABLE 1 HERE

There are also a number of interesting findings pertaining to the control variables. The ratio of revenue to the number of members is positive and highly significant, suggesting that the resources available for meeting community needs matter for beneficiary satisfaction. The only other control variable that is significant is the micro-credit indicator variable. Communities award considerably lower value added scores to micro-credit organisations; this coefficient is consistently significant.

4. Conclusion
This paper has examined the theoretical or a priori case for donors providing financial incentives to NGOs to increase community participation. We have shown that such a case is not robust in general. Specifically, we have shown that, when such incentives are provided, there need not exist any meaningful relationship between beneficiary welfare and extent of community participation implemented by an NGO. In fact, higher community participation is consistent even with reduced beneficiary welfare. Thus, making expansions in community participation an objective of donor policy may end up generating perverse welfare consequences. Conversely, eliminating community participation from the set of conditions for funding an NGO may improve beneficiary welfare. We have offered evidence from the NGO sector in Uganda that is consistent with our theoretical conclusions. Specifically, we found that greater community participation failed to generate noticeable improvements in beneficiaries' own assessment of the value of an NGO's activities. Thus, the beneficiaries
themselves did not appear to consider that greater community participation led to appreciable value-addition in project output.

Bougheas et al. (2007) show, in the general context of charitable transfers, how conditions imposed by donors may be inefficient, yet persist indefinitely. Our analysis suggests that the current popularity of community participation as a donor conditionality, in the context of developmental aid channelled through NGOs, may possibly constitute an example of this phenomenon. More discriminating assessment of the benefits and costs of community participation as a donor conditionality, in alternative theoretical and empirical contexts, is evidently called for in the light of this paper. Burger et al. (2011) discuss the problem of regulating NGOs by making grants to them conditional on their spending at least some pre-determined proportion of revenue on direct project related expenses. An analogous exercise, carried out in the context of a threshold level of community participation, may yield useful policy-relevant insights.

Lastly, in line with much of the existing empirical literature, the nature of the 'community' that is supposed to 'participate' has been left unexplored in our analysis. Dasgupta and Kanbur (2011, 2007, 2005) have shown how differences in patterns of voluntary provision of public goods crucially affect inequality, distributive tensions and poverty levels, both within and across communities. It is conceivable that such differences, by influencing the costs of consensus-building within a community, may also have a bearing on whether greater community participation leads to substantial improvements in decision-making or simply creates blocking coalitions. Relatedly, Platteau and Abraham (2002) and Platteau and Gaspart (2003) have discussed how existing power relations within a community may cause attempts at ensuring participatory development to generate perverse consequences. How the efficacy of donor-mandated community participation is affected by various aspects of the internal organization of a community is an issue that would merit extensive examination in future research.

References


### TABLE 1: Regression models to describe the determinants of perceived value added

<table>
<thead>
<tr>
<th></th>
<th>Tobit(1)</th>
<th>Reg (1)</th>
<th>Tobit(2)</th>
<th>Reg (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>108.314</td>
<td>98.548</td>
<td>84.877</td>
<td>74.086</td>
</tr>
<tr>
<td>Ratio of revenue to number of members</td>
<td>0.001**</td>
<td>0.0009**</td>
<td>0.001**</td>
<td>0.0009***</td>
</tr>
<tr>
<td>Poverty index</td>
<td>-0.039</td>
<td>-0.024</td>
<td>-0.074</td>
<td>-0.050</td>
</tr>
<tr>
<td>Community participation</td>
<td>9.327</td>
<td>9.381</td>
<td>8.301</td>
<td>8.644</td>
</tr>
<tr>
<td>Ln of staff members</td>
<td>-0.209</td>
<td>-0.056</td>
<td>0.592</td>
<td>0.409</td>
</tr>
<tr>
<td>NGO staff perceived to be selfish?</td>
<td>-6.105*</td>
<td>-4.848*</td>
<td>-5.474*</td>
<td>-4.440*</td>
</tr>
<tr>
<td>NGO specialises in community development?</td>
<td>-8.334</td>
<td>-5.858</td>
<td>-7.189</td>
<td>-4.992</td>
</tr>
<tr>
<td>NGO has religious affiliation</td>
<td>-0.908</td>
<td>-2.594</td>
<td>3.821</td>
<td>0.768</td>
</tr>
<tr>
<td>Ln of years of existence</td>
<td>-0.1360</td>
<td>0.251</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln of years of existence squared</td>
<td>1.363</td>
<td>0.853</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln of years of education of manager</td>
<td>-15.613</td>
<td>-13.886</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln of years of experience in NGO sector of manager</td>
<td>5.842</td>
<td>3.661</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                                |           |         |          |         |
| Observations                   | 116       | 116     | 117      | 117     |
| Uncensored observations        | 86        | -       | 87       | -       |
| Right-censored observations   | 30        | -       | 30       | -       |

|                               | Prob > F  |           |          |         |
| Prob > F                      | 0.0752    | 0.0046    | 0.0458   | 0.0014  |
| R-squared/Pseudo R-squared    | 0.0207    | 0.172     | 0.0165   | 0.1448  |

*Represent 10% level of significance
** Represents 5% level of significance
*** Represents 1% level of significance
Appendix 1: Descriptive statistics

FIGURE A1.1: Distribution of the share of beans allocated to the NGO

FIGURE A1.2: Beans allocated by perceived level of selfishness (Likert scale)
FIGURE 1.3: Share of beans allocated to NGOs that practised community participation.
### Appendix 2: List of variables

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation/derivation of variables</th>
<th>Data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio of revenue to number of members</td>
<td>Total revenue in 2001 and imputed total revenue (using expenditure variables from 2001 and 2000), divided by the NGO’s number of members</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>Poverty index</td>
<td>This index was compiled with weights derived using principal component analysis. It included five indicators of community-wide deprivation, namely, the incidence of households having access to shoes, blankets (for all individuals under 18), sugar, at least two sets of clothing, and soap. The weights applied are positive; consequently a higher index score is indicative of less deprivation.</td>
<td>Ugandan Census 2002</td>
</tr>
<tr>
<td>Community participation</td>
<td>This is a binary variable. NGOs were classified as following the community participatory approach when they had an office in the community, asked the community about their needs before initiating a project, required feedback from the community after completing a project, and elected the manager democratically.</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>Ln of staff members</td>
<td>The number of staff members (including the self-reported number of staff members and volunteers). Part-time staff members were weighted as being the equivalent of half a full-time staff member.</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>NGO staff perceived to be selfish?</td>
<td>Does the NGO offer micro-finance loans?</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>NGO specialises in micro-credit?</td>
<td>The NGO list community development as one of its activities</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>NGO specialises in community development?</td>
<td>Does NGO have a religious affiliation?</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>Ln of years of existence</td>
<td>The NGO’s start date subtracted from the year of the survey (2002)</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>Ln of years of education of manager</td>
<td>The number of years of education of the NGO’s manager</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>manager</td>
<td>The number of years that the NGO has been with the NGO added to the number of years of prior experience in other NGOs</td>
<td>NGO questionnaire</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Ln of years of experience in NGO sector of manager</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research Papers at [www.nottingham.ac.uk/economics/credit/](http://www.nottingham.ac.uk/economics/credit/)