Is International Funding Crowding Out Charitable Contributions in African NGOs?*

Marcel Fafchamps   Trudy Owens

University of Oxford †   University of Nottingham

February 2006

Abstract

Using original Ugandan data collected by the authors, we examine the determinants of funding to local NGOs. We begin by presenting a simple theoretical model of crowding out. We then turn to the empirical estimation. We find that success in attracting grants from international donors depends mostly on network effects. In contrast, NGOs that raise in kind resources locally tend to be young NGOs managed by someone who is simultaneously employed elsewhere. We find evidence of crowding out: NGOs that receive grant funding are less likely to obtain resources locally, whether in cash or in kind. But crowding out seems to be primarily the result of selection: once we control for NGO fixed effects, we find no evidence that NGOs receive less revenue from fees and donation after obtaining a grant. These results suggest that donors regard Ugandan NGOs as sub-contractors of their developmental effort, not as charitable organizations in their own right.

1. Introduction

Recent years have seen a rising involvement of non-governmental organizations (NGOs) in the development process (e.g. Edwards & Hulme 1995, Hulme & Edwards 1997). This phenomenon is partly a consequence of dissatisfaction with government performance in the delivery of public services. As a result, international NGOs as well as bilateral and multalateral donors increasingly seek to channel development funding through local NGOs. As a result, the NGO sector has grown rapidly in developing countries. What is unclear is whether donors, through their funding, encourage the blossoming of a local charitable sector, or whether local NGOs are nothing but sub-contractors for international development agencies.

The general presumption is that NGOs operating in poor countries are charitable organizations, by which we mean that they have an altruistic or philanthropic purpose that is shared by their members and promoters. Much of the dissatisfaction of donors with government public service delivery originates in concerns over corruption. The general sentiment is that civil servants running government schools and health centers are motivated by self-interest, and this explains why they divert resources from the public (e.g. Reinikka & Svensson 2003, Lindelow, Reinikka & Svensson 2003). NGOs, in contrast, are thought to be less selfish and thus less likely to divert funds. The belief in the altruistic motivation of NGOs underlies the switch in donor funding.

A number of authors have voiced doubts that the motives of NGO promoters in poor countries are first and foremost charitable (e.g. Edwards & Hulme 1995, Platteau & Gaspart 2003). But these doubts are in general based on a limited number of case studies. There does not exist an investigation of these issues using a large representative sample of NGOs. Given the increasing importance of local NGOs and their potential for delivering services, this lacuna needs to be filled. The purpose of this paper is to throw some light on this issue by examining the factors

that influence the capacity of local NGOs to attract external resources. To this effect we use a nationally representative survey of 300 NGOs that we helped conduct in Uganda.

NGOs obtain resources in a variety of ways. Some resources are raised in cash – financial grants, membership fees. Other are raised in kind – volunteer work, complimentary use of equipment and facilities. In the case of Uganda, Barr, Fafchamps & Owens (2003) have shown that international grants are by far the major source of funding for the domestic NGO sector as a whole. They also point out that, among small NGOs, membership fees and donations play a much more important role. This raises the possibility that the local NGOs that receive donor funding are in some fundamental sense different from NGOs that attract voluntary contributions from nationals. To investigate this, we examine the factors that influence the capacity of local NGOs to successfully obtain grant funding. We contrast them with the determinants of voluntary contributions in cash and in kind.

We first approach this issue from a reduced form perspective and we examine whether the ex ante characteristics of NGOs receiving grant funding are the same as those that do not. We find that NGOs receiving external funding differ markedly from those that do not: they are much more likely to be part of an international network and to be managed by an educated, well connected manager. We also find that grant recipients on average raise fewer resources domestically.

We then seek to understand whether donor funding displaces voluntary contributions from nationals. We are interested to know whether international funding acts as a complement or substitute for local charity. One possibility is that local NGOs are genuinely altruistic organizations whose effectiveness is enhanced by external funding. In this case we would expect externally funded NGOs to expand and attract more local resources. Another possibility is that local NGOs act as sub-contractors for international donors, in which case raising local funding

does not matter. It is also conceivable that local NGOs are altruistic but that external funding crowds out their own willingness to give.

This is a difficult issue to investigate, especially given the fact that we do not have longitudinal data – and hence cannot compare locally raised resources before and after an NGO receives a grant. Using an instrumental variable approach instead, we find evidence that grant recipients raise fewer resources locally, notably in the form of member fees and contributions.

Taken together, the evidence suggests that grants from external donors are not encouraging the local emergence of a charitable sector. Many local NGOs seem to be created not with an altruistic motive in mind but for the purpose of obtaining grant funding.[1] This interpretation is reinforced by the very large number of Uganda NGOs that only have a shadowy existence if they do not receive an external grant. For instance, of the 1700 or so NGOs registered in Kampala at the time of the survey, only a quarter could be located. Grants do not appear to go to NGOs that would raise funds on their own if they were not funded externally. Rather they go to a relatively small number of well educated, well connected organizations and individuals skilled at writing grant applications.

Before we move on to the analysis, an important remark is in order. Observing that grant recipients do not raise local resources does not imply that they do a bad job of delivering services to the population. But it calls into question the assumption that underlies the switch away from government services: if local NGOs are not driven by an altruistic motive, why should they be trusted to behave in a less opportunistic manner than civil servants? There may be other reasons for donors to prefer private service delivery, such as better control, faster response to emergencies, or the promotion of a specific message or agenda. But based on the evidence presented here it would be foolish to rely on its supposed altruism to economize on monitoring.

---

[1]At the time of the survey, in Uganda there were only 400 registered (for-profit) firms but 3500 registered NGOs.

The paper is organized as follows. We begin in Section 3 by presenting the conceptual framework that underlies our empirical analysis. A model is constructed in which a local NGO receives external funding from an altruistic donor. Section 3 presents the data, which come from a survey of Ugandan NGOs. The empirical analysis is discussed in Section 4.

2. Conceptual framework

But before getting onto the empirical analysis, we need a conceptual framework with which to interpret the data. To this effect, we construct a simple interaction model between a donor and a local service provider – the NGO. Both organizations are assumed to have altruistic motivations, but the strength of their altruism may vary. NGOs also differ in terms of competence.

The purpose of the model is to identify the circumstances under which grants from the donor and local fundraising by the local service provider are complement or substitute. The main underlying assumption is that the donor cares only about the welfare of the target population. Consequently, the donor wishes to fund the NGO with the biggest 'bang-for-the buck', that is, the organization that generates the largest increase in welfare for a given level of donor funding. NGO effectiveness in turn depends on its altruism and competence. If grant and local funding are complement, an altruitic grant recipient raises more local resources, and this raises its effectiveness. This is the principle at work behind the practice of 'matching contributions'. In contrast, if grant and local funding are substitute – or if local funding is too small – only competence matters: the donor allocates the grant to the most capable NGO, irrespective of its level of altruism. If the NGO is not altruistic at all, it may still receive the grant if it is more capable than less competent but altruistically minded NGOs. In this case, the NGO is basically a for-profit sub-contractor of the donor.

We begin by presenting the decision process of the NGO, before turning to that of the donor.

2.1. The NGO's decision

Consider an altruistic non-governmental organization, hereafter called the NGO.[2] We think of this organization as made of members and promoters who have come together to serve a beneficiary target group. Beneficiary welfare is denoted $V(t,z)$ where t is the cost to the NGO of the service provided to beneficiaries. Variable z is an exogenously given NGO characteristic that denotes how competent it is in serving the beneficiary group.

We assume that $\frac{\partial V}{\partial t} > 0, \frac{\partial V}{\partial z} > 0$, and $\frac{\partial V^2}{\partial t \partial z} > 0$. The first two assumptions state that the welfare gain to beneficiaries increases in the size of the transfer and in the competence of the NGO. The latter assumption means that more competent NGOs are more productive, i.e., that an incremental transfer t generates a higher increase in beneficiary welfare if NGO competence z is higher. For now we also assume that $\frac{\partial V^2}{\partial t^2} < 0$, i.e., that the marginal welfare gain for the beneficiaries falls with the size of the transfer. This may be due to satiation or to increasing marginal cost in the production of services.

The NGO starts with a stock of resources T which for now we take as given. This stock of resources is meant to include the financial resources of members and promoters as well as the value of their time. The NGO must decide how much of T to allocate to the beneficiary target group. The rest is consumed by the organization (i.e., by members and promoters).

The decision problem facing the NGO can be written:

$$\max_{t} V(t,z) + \omega U(T-t) \text{ subject to } t \leq T$$

where ω is a welfare weight measuring how much the NGO cares about the welfare of its pro-

---

[2]In the context of this model, altruism and joy-of-giving are basically equivalent so we do not emphasize the distinction between the two. For a discussion, see for instance Ribar & Wilhelm (2002) and the references cited therein.

moters. We assume that $U(.)$ is increasing and concave, that is, that the marginal utility of consumption falls with consumption – $U'' < 0$. The first order condition and second order conditions for an interior optimum are of the form:

$$\frac{\partial V(t,z)}{\partial t} - \omega U'(T-t) = 0$$

$$\frac{\partial^2 V}{\partial t^2} + \omega U'' < 0$$

Let $t(T, z, \omega)$ denote the NGO decision regarding the amount of transfer it makes to target beneficiaries. Using simple comparative statics, we can sign dt/dT, dt/dz and $dt/d\omega$:

$$\left(\frac{\partial^2 V}{\partial t^2} + \omega U''\right) dt - \omega U'' dT = 0$$

$$\frac{dt}{dT} = \frac{\omega U''}{SOC} > 0$$

$$\left(\frac{\partial^2 V}{\partial t^2} + \omega U''\right) dt - U' d\omega = 0$$

$$\frac{dt}{d\omega} = \frac{U'}{SOC} < 0$$

$$\left(\frac{\partial^2 V}{\partial t^2} + \omega U''\right) dt + \frac{\partial^2 V}{\partial t \partial z} dz = 0$$

$$\frac{dt}{dz} = -\frac{\frac{\partial^2 V}{\partial t \partial z}}{SOC} < 0$$

As anticipated, organizations with more resources (higher T) or more altruism (lower ω) give more while more competent organizations (higher z) give less.[3]

We also see that, with the assumptions we have made so far, the amount given t increases

---

[3]This model prediction follows mostly from the additive separability of the objective function, which imposes restrictions on the substitution elasticity between own and beneficiary consumption. This prediction could be reversed in a more general objective function of the form $W(t, T-t, z)$ allowing for arbitrary substitution betwee the two.

less than proportionally with NGO resources:

$$\begin{aligned}
\frac{dt}{dT} &= \frac{\omega U''}{\frac{\partial^2 V}{\partial t^2} + \omega U''} \\
&= \frac{1}{1 + \frac{\frac{\partial^2 V}{\partial t^2}}{\omega U''}} < 1
\end{aligned} \tag{2.1}$$

since $U'' < 0$ and $\frac{\partial^2 V}{\partial t^2} < 0$ by assumption. Put differently, an additional \$1 of resources translates into less than 1\$ in additional transfers.

This result hinges critically on the assumption that the marginal welfare gain falls with t. As is clear from (2.1), if we assume instead that $\frac{\partial^2 V}{\partial t^2} > 0$, we obtain $dt/dT > 1$.[4] This would be the case, for instance, if there are threshold effects in consumption – for instance if the utility of beneficiaries increases faster than cost over a certain range – or if there are increasing returns in service delivery – for instance because of fixed setup costs. To summarize, whether transfers increase more or less than proportionally with resources depends on the sign of $\frac{\partial^2 V}{\partial t^2}$ and, hence, on whether marginal delivery costs are increasing or decreasing.

2.2. Crowding out

We now turn to the decision facing an international donor wishing to serve the same beneficiary target group. We assume that the donor has a fixed budget G. The donor can serve the beneficiary population directly but, being unfamiliar with local circumstances, it has a low z, say z_d. The donor can also serve its target population indirectly by funding a local NGO.

Whenever $\frac{dt}{dT} < 1$, part of the grant will be captured by the NGO. In response to this, the NGO may seek to monitor the NGO, that is, to impose conditions on the amount of the grant G that can be appropriated by the NGO. This is very difficult to do because of fungibility

---

[4]In order to retain an interior solution, we assume that U'' is sufficiently negative and ω large enough that the second order condition is satisfied.

between G and T: members and promoters can enjoy more consumption without encroaching on G simply by reducing transfers out of their own resources T – e.g, by reducing their donations in time and money to the NGO. Put differently, whenever $\frac{dt}{dT} < 1$ transferring G to an NGO will normally result is less than an increment G being transferred to the beneficiary population. The difference is:

$$D \equiv G - (t(T+G, z, \omega) - t(T, z, \omega)) \tag{2.2}$$

Expression D is what we refer to as crowding out: NGOs that receive grants generate fewer voluntary donations of time and money.

In contrast, if $\frac{\partial^2 V}{\partial t^2} > 0$ and hence $\frac{dt}{dT} > 1$, there is a multiplier effect: the funds disbursed by the donor enable the NGO to go over a minimum threshold or to reap increasing returns to scale, and the NGO members and promoters respond by volunteering more of their own resources since they are now more productive in achieving their altruistic goal. To conclude, whether external and internal funds are substitutes or complement depend on whether $\frac{\partial^2 V}{\partial t^2}$ is positive or negative.

One important special case is when the local NGO would not make any transfer to the beneficiary population in the absence of donor grant. This could occur for two reasons: either because the NGO is not altruistic, or because the NGO is altruistic but its members and promoters are too poor to get over a minimum efficient threshold in service delivery. In the second case, the grant will have a multiplier effect and transfers from members and promoters will increase as a result of the grant. In contrast, in the first case there will be crowding out in the sense that NGO members and promoters will divert some of the grant to their own consumption $T - t$. The NGO is basically a for-profit sub-contractor for the donor. In this case, it is reasonable for the donor to worry about excessive diversion of donor funds and the donor may want to closely monitor the grant recipient.

2.3. The donor's decision

In practice, observing crowding out is complicated by donor selection. If all NGOs are equally likely to receive donor grants, testing crowding out simply requires that we compare voluntary donations of time and money between grant recipients and non-recipients. Unfortunately, grants are not allocated in a random manner.

To develop some intuition on how the selection process is likely to take place, we imagine that donors have the choice between several local NGOs with different T, z and ω.[5] Presumably, they prefer to fund the NGO that yields the highest beneficiary welfare gain, that is, the NGO with the highest 'bang for the buck' B:

$$B \equiv V(t(T + G, z, \omega), z) - V(t(T, z, \omega), z) \tag{2.3}$$

In other words, the donor ranks NGOs according to their B and give the grant to the one with the highest B. Understanding how donors select grant recipients thus boils down to understanding the relationship between B and T, z and ω.

We begin with ω. Totally differentiating (2.3), we obtain:

$$\frac{dB}{d\omega} = \frac{\partial V(t(T + G, z, \omega), z)}{\partial t} \frac{dt(T + G, z, \omega)}{d\omega} - \frac{\partial V(t(T, z, \omega), z)}{\partial t} \frac{dt(T, z, \omega)}{d\omega} \tag{2.4}$$

By our assumption that $\frac{\partial V^2}{\partial t^2} < 0$ and our earlier result that $\frac{dt}{dT} > 0$, it follows that $\frac{\partial V(t(T+G,z,\omega),z)}{\partial t} < \frac{\partial V(t(T,z,\omega),z)}{\partial t}$. We have also shown that $\frac{dt}{d\omega} < 0$. A sufficient condition for $\frac{dB}{d\omega} < 0$ is thus that $\frac{dt(T+G,z,\omega)}{d\omega}$ be smaller than $\frac{dt(T,z,\omega)}{d\omega}$ in the absolute sense. Since $\frac{dt}{d\omega} = \frac{U'}{SOC}$ and U' is decreasing

---

[5] For simplicity, we assume in this simple model that all funding G from a specific donor goes to a single NGO.

9

in t, it follows that $\frac{d^2 t}{d\omega dT}$ is in general positive.[6] Consequently it follows that $\frac{dB}{d\omega} < 0$: the donor should not fund a selfish NGO.

Turning to T, we obtain the following expression by again totally differentiating (2.3):

$$\frac{dB}{dT} = \frac{\partial V(t(T+G,z,\omega),z)}{\partial t} \frac{dt(T+G,z,\omega)}{dT} - \frac{\partial V(t(T,z,\omega),z)}{\partial t} \frac{dt(T,z,\omega)}{dT} \qquad (2.5)$$

As before, $\frac{\partial V(t(T+G,z,\omega),z)}{\partial t} < \frac{\partial V(t(T,z,\omega),z)}{\partial t}$. A sufficient condition for $\frac{dB}{dT}$ to be negative is thus that $\frac{dt(T+G,z,\omega)}{dT} \leq \frac{dt(T,z,\omega)}{dT}$, which is normally the case.[7]

The above analysis shows that, provided that U''' and $\frac{\partial^3 V}{\partial T^3}$ are sufficiently small, the donor can expect a larger welfare gain to the target population if funds are given to a more altruistic NGO (lower ω) or less wealthy NGO (lower T). The intuition behind the result for ω is fairly straightforward: a selfish NGO will divert more funds towards the welfare of its members and promoters. The intuition behind the result for T is that poor NGOs are constrained in what they can give. Controlling for competence, giving them more funding enables them to increase their assistance to the target population more than a less constrained NGO. In other words, crowding out is predicted to be less severe among poor NGOs.

The role of NGO competence z is slightly harder to pin down. Totally differentiating (2.3)

---

[6]Indeed we have

$$\begin{aligned} \frac{d^2 t}{d\omega dT} &= \frac{d}{dT}(U' SOC^{-1}) \\ &= -U'' \frac{dt}{dT} SOC^{-1} - U' SOC^2 \frac{dSOC}{dT} \end{aligned}$$

A sufficient condition for this $\frac{d^2 t}{d\omega dT} > 0$ is that $\frac{dSOC}{dT} \geq 0$, which we will assume. This condition is fulfilled, for instance, when $U''' = \frac{\partial^3 V}{\partial T^3} = 0$.

[7]It can be shown that a sufficient condition for $\frac{d^2 t}{dT^2} = 0$ and thus $\frac{dt(T+G,z,\omega)}{dT} \leq \frac{dt(T,z,\omega)}{dT}$ is that $U''' = \frac{\partial^3 V}{\partial T^3} = 0$.

with respect to z yields:

$$
\begin{aligned}
\frac{dB}{dz} &= \left(\frac{\partial V(t(T+G,z,\omega),z)}{\partial z} - \frac{\partial V(t(T,z,\omega),z)}{\partial z} \right) \\
&+ \left(\frac{\partial V(t(T+G,z,\omega),z)}{\partial t} \frac{dt(T+G,z,\omega)}{dz} - \frac{\partial V(t(T,z,\omega),z)}{\partial t} \frac{dt(T,z,\omega)}{dz} \right) \quad (2.6)
\end{aligned}
$$

Since we assumed that $\frac{\partial V^2}{\partial t \partial z} > 0$, the first term is positive: more competent NGOs are better at transforming additional funding into beneficiary welfare. The second term captures the NGO's adjustment in its transfer level as a response to receiving G. This effect is difficult to sign a priori. Provided it is small enough, as we will assume, the direct effect dominates and it is in the donor's interest to fund a competent NGO, i.e., $\frac{dB}{dz} > 0$. To summarize, donors are more likely to fund NGOs that are more altruistic, more competent, and less rich.

2.4. Private contributions and user fees

We have shown that expenditures t on the beneficiary population increase with T and ω and that crowding out is most severe when ω is low. So far we have interpreted this as an altruism effect: when NGO promoters care more about the welfare of the beneficiary population, they are less likely to reduce their voluntary contributions. There are other possible interpretations, however.

One alternative interpretation of ω is that it measures honesty. Nothing in the model requires that $t > G$. A dishonest promoter would not mind setting setting $t < G$, thereby diverting outside funds towards personal consumption. In this context, parameter ω can be seen as measuring how much guilt or shame NGO promoters would feel from diverting outside funds. It is obvious that donors prefer honest NGOs since the private welfare of NGO promoters does not enter its objective function. In the extreme case where all funds are diverted, there is complete crowding out: $t = 0$ and $D = G$. In the context of our model, altruism and dishonesty are two

11

sides of the same coin.

It is also conceivable that NGOs raise local private funds in addition to grants given by donors. The literature on charitable contributions has typically couched the discussion of crowding out in terms of public versus private outside funds (Ribar & Wilhelm 2002). This is largely due to the fact that the literature so far has focused on developed countries where charitable contributions from the general public are common. A distinction has been drawn between altruism – i.e., concerns for the utility of the beneficiary population – and joy-of-giving – which does not depend on the welfare of beneficiaries. Free riding among altruistic benefactors leads to a reduction of voluntary contributions as the number of benefactors increases. Ribar & Wilhelm (2002) show that, when altruism is the only reason for giving, for many functional forms and parameter values public funds crowd out private contributions one for one, i.e., one additional dollar of public money reduces private contributions by one dollar. In our model free riding does not arise since, by construction, there is a single contributor. In the case of multiple private contributors, free riding adds another source of crowding out, in which case the distinction between altruism and joy-of-giving becomes relevant. We refer the interested reader to the literature for a detailed discussion of these issues. Here $\omega U(T - t)$ can be regarded as a reduced form summarizing the equilibrium of the private contribution game.

It is also possible to expand the model to allow for active fundraising on the part of the NGO. Modeling this process in detail would take too much space, so we limit ourselves to a few essential observations. Imagine that the NGO has a (probabilistic) production function for obtaining grants and private funds. Fundraising takes time and effort from NGO promoters, thereby subtracting from t.[8] When the NGO has no grant, the opportunity cost of promoter time is low and the NGO devotes more effort to raise private funds. When the NGO receives

---

[8]This implicitly assumes that the NGO cannot hire fundraising staff at constant cost, i.e., there is some kind of capacity constraint on fundraising.

a grant, the opportunity cost of the promoter's time rises, thereby reducing private fundraising effort. This is another source of crowding out. Again, we can think of $\omega U(T-t)$ as incorporating this effect.

User fees are a different issue. So far we have assumed that private benefactors do not themselves benefit from the activities of the NGO. If they do, their contribution can potentially be seen as a payment for service, or user fee. Without going into the details of the level at which user fees are set,[9] we simply note that revenue from user fees is an increasing function of NGO output t: an NGO that produces nothing receives no user fees. To the extent that receiving a grant enables the NGO to produce more, it also increases revenue from user fees.

In our data, it is difficult to distinguish between user fees and charitable contributions. This is because user fees are often recorded as membership fees and NGO members are typically beneficiaries of its activities (Barr, Fafchamps & Owens 2005). Without detailed information on the explicit or implicit conditionality attached to membership fees, it is impossible to separate the fee-for-service element from charitable giving. The important thing to keep in mind is that income from membership fees is likely to increase with grant income, thereby generating a multiplier effect rather that goes in the direction opposite to crowding out.

2.5. Asymmetric information

So far we have worked under the assumption that the donor observes the characteristics T, z and ω and effort t of the NGO. In practice, donors are not fully informed about the type and effort of grant applicants. Although the presence of imperfect information does not invalidate what we have said about crowding out, it has implications regarding the empirical analysis.

---

[9]If the user fee is equal to willingness to pay, whether or not the NGO creates a net welfare gain for beneficiaries depends entirely on whether the private sector could offer an identical service. If the user fee is less than willingness to pay, the intervention includes a transfer element. In our context, it is fair to assume that a transfer element is present.

Donors may seek to observe effort t through monitoring. This can be accomplished in a variety of ways – e.g., reporting requirements, field visits, survey of benefactors, audit – which are all costly. Monitoring diverts resources that could otherwise be devoted to beneficiaries.[10] It is therefore in the interest of donors to economize on monitoring. We have noted that, if the NGO is altruistic (in the sense of a low ω), diversion of funds is not a concern. Diversion only becomes a serious issue if the NGO has a high ω. In the extreme case in which the NGO is nothing but a for-profit sub-contractor for the donor, monitoring is essential. Donors are thus more likely to monitor NGOs whose altruism – or honesty – they are suspicious about.

Given that monitoring is costly but effort depends on NGO type, donors would like to know the NGO's type – particularly its altruism ω and its competence z. Screening is thus likely. In their effort to screen out high ω/low z NGOs, donors may rely on statistical discrimination – using observable characteristics to infer unobservable traits. For instance, they may rely on observed voluntary contributions to the NGO as an indication about promoters' altruism. Donors may also surmise that private contributors may be better informed about NGO type, and rely on private donations as a signal that the NGO is a good one. This raises the risk of selection bias: if donors prefer NGOs that raise local funds, in a cross-section analysis, we should observe a correlation between grants and private contributions, biasing the results against finding evidence of crowding out. We have to keep this in mind when interpreting the results.

If one donor relies on the action of another donor to infer something about unobservable type, herding is likely to arise: once an NGO has succeeded in demonstrating its reliability with better informed contributors, it gains easier access to less informed ones. By the same reasoning, an NGO that has secured funding from one donor may find it easier to subsequently obtain funding from another. This raises the potential gain from signaling: dishonest NGOs

---

[10] This is true whether the monitoring cost is borne by the donor (e.g., field visit) or by the grant recipient (e.g., reporting). Cost minimization should dictate the allocation of monitoring tasks between donor and recipient.

may manipulate the signal in order to improve their chance of obtaining a grant. Of course, if donors understand this, the signal no longer has value.

Relational contracting is a common method for economizing on screening and monitoring. By embedding the grant allocation process in a repeated game between the donor and NGO, the donor can address both problems at the same time: by continuing to deal with NGOs that have proved reliable in the past, the donor economizes on screening; by threatening to discontinue funding to low achievers, it can discipline effort. The threat of discontinuing funding is only effective against NGOs with a sufficiently low ω and sufficiently high z. NGOs that are incompetent and dishonest will simply take the money and run. A system of contract enforcement based on repeated interaction cannot totally eliminate fraud, a point that is discussed in detail by Fafchamps (2002) in the context of market transactions.[11] International donors probably fear the bad publicity associated with funding fraudulent or ineffective NGOs, because it would affect their own capacity to raise funds from the public in their home country. For this reason, we expect donors to be conservative in their choice of grant recipients, displaying a strong preference for NGOs with which they have worked in the past, or for individuals with whom they have previously dealt in other NGOs.

The difficulty of identifying reliable NGOs, combined with the bad publicity risk associated with possible fraud, is likely to result in inertia and favoritism: afraid to make a bad choice, donors are likely to experiment little with new faces, preferring instead to work with NGOs they already know. This, in turn, reduces competition among existing NGOs and makes entry difficult for new ones. As a result, the productivity of the sector may be poor.

While these issues are not the focus of this paper, any study of grant funding must keep them in mind, especially when identifying factors that need to be controlled for in the econometric

---

[11] To limit the wastage of funds on ineffective or dishonest NGOs, donors may 'start small', giving only small grants to NGOs that are unknown to them (Watson 1999).

analysis.

2.6. Testing strategy

Our objective is to identify the factors that affect NGOs' capacity to raise internal and external funds and resources. Let internal resources in cash and in kind, be denoted C_i and external grants be denoted G_i. We first estimate reduced forms and regress C_i and G_i on various NGO characteristics Q_i that proxy for their competence, wealth, and level of altruism:

$$C_i = \alpha_0 + \alpha_1 Q_i + u_i \tag{2.7}$$

$$G_i = \beta_0 + \beta_1 Q_i + v_i \tag{2.8}$$

If, as they often claim, donors rely on NGOs' altruism to minimize incentive problems, we expect the same variables to be significant in both (2.7) and (2.8): factors that make it more likely that an NGO raises internal funds should also explain success in raising external funds. As discussed earlier, one possible exception is the wealth of the NGO members and promoters: if they are rich, they may contribute more internal funds but receive fewer external funds.

If NGOs are regarded as sub-contractors by external donors, our model predicts that only competence matters. Since donors do not expect NGO promoters to contribute or to raise private funds locally, their wealth and altruism are irrelevant to donors. If this were the case, we would expect variables measuring wealth and altruism to be significant in the internal resource regression (2.7) but not in the external resource regression (2.8).

It is also conceivable that donors shy away from NGOs that, thanks to their religious activities, are more successful at raising charitable funds locally. Most international donors are secular organizations; they are reticent to facilitate religious proselitization by funding churches' social activities. It is, however, reasonable to expect religious organizations to be more altruistic, at

16

least towards their followers.[12] If donors care a lot about altruism, they may overcome their secular leanings and choose to operate via religious organizations.

We are also interested in measuring the extent of crowding out. To this effect, we wish to compare $t(T + G, z, \omega) - G$ for grant recipients to $t(T, z, \omega)$ for non-recipients. We do this in two ways. First we regress voluntary contributions C_i to NGO i by members and promoters on whether the NGO is a grant recipient G_i and a set of controls Q_i:

$$C_i = \gamma_0 + \gamma_1 G_i + \gamma_2 Q_i + e_i \tag{2.9}$$

This is also the approach adopted by Ribar & Wilhelm (2002) to measure crowding out. The difficulty with this approach is the possible presence of endogeneity bias: NGOs that were unsuccessful in raising grant funding may subsequently put more effort in generating local and internal resources to keep the organization going. To correct for this possibility, we instrument G_i using variables that explains grant allocation but not crowding out, that is, factors that affect the probability of receiving a grant independently from beneficiary considerations. As we have discussed in the previous sub-section, one such factor is favoritism: because of asymmetric information NGOs may be more likely to receive grants from donors who are closer to them socially or contractually. Variables proxying for favoritism can thus be used to instrument access to grants.

We also use a second approach. Suppose we find that $\gamma_1 < 0$. Does this necessarily implies crowding out? Not necessarily. It possible that, for some unknown reasons, donors are attracted to NGOs that are less involved in raising internal or local funds. If this were the case, we would observe a negative relationship between C_i and G_i, even after instrumenting, but this

---

[12] The Movement for the Restauration of the Ten Commandments of God is a stark exception: in the 1990s church officials slaughtered hundreds of Ugandan followers after having induced them to bequeath their assets to the church.

relationship would be due to reverse selection by donors.

To investigate this possibility, we use a panel analysis approach. Each NGO was asked to provide income statements for two consecutive years. We can thus see whether NGOs respond to a change in grant funding by adjusting internal and local funding. The approach offers the advantage of controlling for unobserved heterogeneity.

The two approaches nevertheless complement each other. The second approach indicates whether grant funding induces crowding out in existing NGOs. The first approach indicates whether donors induce crowding out in the sectors as a whole, favoring the emergence of NGOs that are less involved in internal and local financing – and operate basically as sub-contractors for external donors.

3. The data

In 2002 Barr, Fafchamps and Owens undertook the first nationally representative survey of NGOs in Uganda. The survey, initially proposed by a group of Ugandan NGOs, was organized by the World Bank in collaboration with the Office of the Prime Minister of Uganda, with funding provided by the Japanese government and the World Bank. The survey was undertaken by the Centre for the Study of African Economies (CSAE) of Oxford University in collaboration with International Development Consultants (IDC), based in Kampala.

The survey collected information on what the sector does, its sources of funding, and details about its personnel, including questions on characteristics of the leader of the NGO. A two-step sample selection process was used. In the first step, we identified a list of districts in which data collection was to take place. The capital city Kampala was included because of its importance as a base for many NGOs. In addition, 14 districts were randomly selected from the 56 remaining

districts.[13] A random sample of NGOs was then selected – 100 from the capital city of Kampala and 200 from the 14 rural districts. For sampling purposes, an NGO was said to belong to a particular district if its headquarters were in that district.

In order to draw a random sample of NGOs, we first constructed a listing of all active NGOs in the selected districts. Our starting point for this task was the record of the NGO Registration Board in the Ministry of Internal Affairs (MIA).[14] As of December 2000, approximately 3,500 NGOs were registered with the Board. However, not all of these were operational. So, before sampling the registers for the selected districts were updated and verified. The results of this verification exercise are discussed in detail in Barr, Fafchamps & Owens (2005). A sample of 100 NGOs was then drawn randomly from the 451 Kampala-based NGOs that could be traced. For the rural districts, a self weighting sample of 200 NGOs was randomly selected from verified listings for the 14 randomly selected rural districts. The combined stratified sample (Kampala plus districts) is roughly representative of the national situation. Further details relating to the sampling procedure can be found in Barr, Fafchamps & Owens (2003).[15]

---

[13]The 14 selected districts were Arua, Busia, Iganga, Jinja, Kabale, Kassese, Kibaale, Lira, Luwero, Mbale, Mbarara, Mukono, Rakai and Wakiso. One district (Gulu) that was initially included in the list was subsequently replaced because of the lack of security in the region.

[14]The registry does not include the Catholic Church, the Church of Uganda (Anglican), and the Uganda Muslim Supreme Council, three organizations that have been operating in the country for many years; for this reason, these organizations are omitted from the survey in spite of their large size. This must be kept in mind when interpreting the results.

[15]A detailed questionnaire was designed and pre-tested in Uganda by the authors with the help of Abigail Barr. The survey was conducted through face-to-face interviews between enumerators and an NGO representative – usually the head of the NGO. The enumerators and their supervisors received a week's training on the questionnaire and on interviewing techniques before the survey began. A copy of the questionnaire can be found in Barr, Fafchamps & Owens (2003).

4. Empirical analysis

4.1. Univariate analysis

We now proceed with the analysis. Based on the data, we first construct a measure of V_i as financial contributions to the NGO received from members through fees and donations. This information is only available for a sub-sample of the dataset (199 respondents) who agreed to provide financial accounts. But we also have data for the full sample on the number of full-time volunteer staff; the total time volunteered during last 12 months, and whether the NGO has complimentary use of office space, buildings or vehicles. Barr, Fafchamps & Owens (2005) have shown that these are important resources, especially for non grant recipients.

For G_i we use two different measures: a dummy that takes value 1 if the NGO received a grant in the 12 months preceding the survey, and the value of grant funding received in the last fiscal year. Again, the latter information is only available for the respondents who provided financial data. We revisit this issue when we perform robustness tests below.

The qualifications and experience of the NGO manager are used as measures of NGO competence z. Manager qualification variables include age, education, and work experience. Because the NGO manager is nearly always its promoter, the wealth and parental background of the NGO manager are used as controls for wealth T. Altruism ω is proxied by a dummy variable that takes value 1 if the NGO has a religious affiliation. The expectation is that religious NGOs are more altruistic. We also include a female manager dummy to capture various confounding effects associated with gender – including the possibility that female managers are more altruistic. To proxy for favoritism, we include a dummy variable that indicates whether the local NGO is an affiliate of the donor; and whether the NGO is a member of a Ugandan NGO network. Presumably, NGOs that are better connected have a better change of securing grant funding.

Table 1 provides a description of the regressors for the whole sample as well as a break down between grant recipients and others. We also report a simple *t*-test of the different between the two. We see that, among grant recipients, NGO promoters are more likely to have a significantly higher level of education, to have more work experience, to have previously worked for the government, and to have other current employment with an NGO. They are less likely to have any other kind of current employment. NGOs that are grant recipients are also older, more likely to be a subsidiary of a foreign NGO, and more likely to belong to a Ugandan NGO network.

These findings suggest that personal contacts matter: NGOs that receive grants tend to be those that are better connected. The experience and qualifications of the NGO and its manager also seem to matter, suggesting that grant funding goes to more competent NGOs. In contrast, the wealth and parental background of the NGO promoter do not show any systematic relationship with grant recipient status. This constitutes our first bit of evidence suggesting that donors regard local NGOs as sub-contractors more than altruistic partners.

We also see at the bottom of the Table that grant recipients are less likely to raise voluntary contributions from members and local private donors. The difference is statistically significant but not large in magnitude. This is because most Ugandan NGOs raise some contributions from members. In aggregate, grants represent around 80% of total NGO funding in Uganda while internal and local funding from private contributors accounts for less than 3%. However, there are large differences between NGOs in the proportion of their funding that comes from local private hands. This is because most grant funding goes to a very small number of NGOs, with the majority of Ugandan NGOs receiving small grants or no grant at all.

In the conceptual section, we hinted that if donors rely on NGO altruism, they should monitor them less. It follows that donors should use evidence of altruism – such as voluntary contributions by members and promoters – to decide how closely to monitor grant recipients.

21

To investigate this idea, we examine whether donors are more likely to monitor NGOs for which voluntary contributions C_i are zero. To this effect, we look at which NGOs are required to supply monthly and half-yearly financial accounts. We compare two groups of grant recipients: those that who receive only a grant and no voluntary contributions, and those that receive both. We find that the latter are less likely to have to report financial accounts than the latter. The difference is significant at the 1% level for monthly reports and at the 10% level for the half-yearly financial accounts. This suggests that, consistent with model predictions, NGOs that depend on grant funding or sub-contracting contracts alone have more stringent monitoring requirements.

4.2. Reduced form regressions

Inference based only on univariate comparisons can be misleading because explanatory variables often interact with each other. We now turn to multivariate analysis and proceed with the estimation of reduced forms (2.7) and (2.8). We begin by considering simply the determinants of success in obtaining a grant with only characteristics related to the NGO, excluding promoter characteristics.[16]

Results, shown in the first column of Table 2, confirm several of the univariate findings: the likelihood of receiving a grant increases with the age of the NGO, whether it is an affiliate of a foreign NGO, and whether it belongs to a Ugandan network of NGOs. While the first may be indicative of NGO experience, the latter two probably capture the role of personal contacts in accessing grant funding. These findings suggest that donors have difficulties identifying NGOs they can trust. As pointed out in the conceptual section, this should result in repeated interac-

---

[16]We experimented with other NGO characteristics such as whether it is registered, whether it has a formal affiliation with a line ministry, whether it pays taxes, whether it owns land or equipment, whether it is located in Kampala, and its start-up capital. We also examined whether the likelihood of grant funding depends on the type of activity in which the NGO is engaged and on the number of districts in which it operates. Finally, we examined whether total NGO capital matters (value of land, buildings, equipment, and vehicles). None of these variables turned out to be significant.

tion to economize on screening and monitoring. This is indeed what the data suggests: of 161 surveyed NGOs reporting ever receiving a grant, only 9 had never received one in the past. The NGO age effect is non-linear, peaking at around 3 years of experience and falling thereafter. Having a religious affiliation has a negative sign, but is not significant. Other variables, such as whether the NGO targets the poor or is based in the capital city Kampala, have no significant effect on success in obtaining a grant.

Next we include manager characteristics. Results are presented in the second column of Table 2. The results seem to suggest that grant attribution is mostly driven by acquaintance, with no evidence that competence matters. The age and education of the manager are not significant, and experience (proxied by length of tenure in the surveyed NGO and by previous experience in another NGO) has a negative influence on the likelihood of obtaining a grant. NGOs whose manager works in another NGO have a higher likelihood of obtaining a grant, a finding consistent with the idea that contacts play a role in obtaining grants. As predicted by the model, wealth indicators have a negative effect: NGO managers who had wealthy parents and who have a regular job elsewhere are less likely to have obtained a grant.

The last column of Table 2 shows similar results using grant revenue as the dependent variable. This information is only available for the two thirds of the respondents who reported information on their revenues.[17] Results are by and large similar to those of column 2. The main difference is that being based in Kampala raises grant income, suggesting that NGOs based in the capital city tend to receive larger grants. NGOs whose manager is employed by another NGO also seem to receive more grant funding, although the coefficient is only significant at the 12% level.

We then compare these results with those for the raising of internal and local resources. We

---

[17]Other observations are lost because of missing information on the regressors.

consider three indicators of local and internal funding: revenues from fees and donations; the proportion of full-time workers who are volunteers; and whether the NGO receives complimentary usage of equipment or vehicles from other sources. The first captures the main sources of internal and local finance which, as we have seen, is quite small in terms of aggregate funding. The other two capture in kind resources. Volunteers represent 54% of full-time workers and 71% of part-time workers in the sector as a whole, so the contribution is non-negligible. A quarter of all NGOs use vehicles belonging to others and a quarter have complimentary usage of equipment (e.g., computers) that does not belong to them.

The same reduced form regressions are estimated for all three, without and with manager characteristics. Results, presented in Table 3, show that the factors influencing internal and local resources are quite different from those influencing grant funding. Contrary to grant funding where the effect was positive, affiliates of a foreign NGO are less likely to rely on local funding and volunteers. NGO age has a large negative effect on volunteers and complimentary use of equipment, suggesting that these are temporary palliatives used by young NGOs, not permanent ways of funding their operation. We also see that religious NGOs and NGOs that targer the poor use fewer volunteers, a finding that is hard to reconcile with the idea of an altruistic motive for volunteering but that is consistent with volunteering being a way of jump-starting an NGO before it receives a grant.

Manager characteristics also have a very different effect on local resources. The length of tenure in the current NGO is associated with more revenue from fees and donations, suggesting that experience is important in raising funds locally. Having an outside job is associated with volunteering and complimentary use of equipment, two findings that are again consistent with efforts to jump-start an NGO with limited resources.

From this reduced form analysis we conclude that the factors that determine success in at-

tracting grant funding are quite different from those that influence internal ressources. Grant funding seems to be influenced largely by network effects – being an affliate of an international NGO, belonging to an NGO network, or having a manager who works for another NGO. Volunteers and complimentary equipment, in contrast, seem to be resources that young NGOs mobilize in order to jump-start their operations, perhaps in the hope of obtaining grant funding later on. Only fees and donations from local private sources depend on manager experience.

4.3. Testing for crowding-out

Next we turn to the estimation of equation (2.9). Instrumented results are reported in Table 4 together with the grant instrumenting equation. The grant variable is a dummy variable that takes value 1 if the NGO ever received a grant. Instruments include whether the NGO manager has previously worked for government and whether the manager has relatives abroad. These variables may help the NGO get the necessary contacts with international donors, but by themselves they are not expected to help the NGO raise private funds locally. The instruments are jointly significant, albeit not very strongly. They also pass the overidentification test for all three instrumented regressions. Haussman exogeneity test fails to reject the presence of grant endogeneity. Given the small size of the sample and the standard difficulty of idenfitying fully convincing instruments, these results should nevertheless be considered as tentative and illustrative.

Results indicate that grants are negative correlated with the raising of local resources: the instrumented grant variable has a negative sign in all three regressions. The effect is large in magnitude but only significant at the 10% level. Similar results are obtained if manager characteristics are omitted.[18] These results are not very strong but given the difficulty of obtaining

---

[18]Because revenues from fees and donations are only reported for a subset of respondents, we also seek to address the reporting issue using a Heckman selection model. Results are not reported here to save space. The

the information required for such a test and the absence of any rigorous evidence on this issue in developing countries, they nevertheless provide valuable – if impressionistic – information.

Our findings is consistent with crowding out: NGOs that obtain grant funding raise fewer resources locally. As explained earlier, this finding could be because individual NGOs reduce the mobilization of local resources after receiving a grant, or because donors select grant recipients that are not as involved in local fundraising. To investigate this, we use the information on two consecutive income statements reported by respondents to conduct a panel analysis. This enables us to test whether NGOs reduce fees and donations from private sources after receiving a grant. Table 5 shows the results from an NGO fixed effect regression of revenue from fees and donations on grant revenue. We see that an increase in grant revenue is associated with an increase in income coming from fees, but not with an increase in donations. The total net effects on contributions from private sources is not significant.

Taken together, results suggest that the crowding out effect observed in Table 4 is thus due to donor selection. NGOs that are successful at getting grants from international donors are significantly less likely to raise local resources. But once they receive a grant, they do not reduce internal funding. If anything, the income they generate from membership fees increases. This is probably because grant revenue enables the NGO to offer more services to members, in exchange of which they receive more user fees. This interpretation is reinforced by the observation that most NGOs offer services to their members (Barr, Fafchamps & Owens 2005). At the same time, the income generated from donations – probably a concept closer to altrustic contributions – does not fall with grant income, suggesting that crowding out is not present at the level of individual NGOs.

The negative relationship observed in Table 4 between external and internal funds must

key finding is that when we control for selection the grant variable remains negative and significant. The selection equation also suggests that selectivity bias does not appear to be an issue.

be due to a selection effect: the NGOs that seek grants and are good at getting them differ from those that are less successful at securing grants. It is as if international donors do not seek out the most altruistic and charity-minded NGOs when allocating grants. This makes us suspect that local NGOs are seen by donors more as sub-contractors than as local charitable organizations that need to be encouraged by outside assistance.

5. Conclusion

In this paper we have examined the determinants of internal and external funding for non-governmental organizations. We begin for formulating a conceptual framework in which altruistically motivated NGOs provide a public service to a target beneficiary population. We show that NGO transfers to beneficiaries are an increasing function of their wealth and altruism. They should also increase with their competence or technological advantage in fulfilling their social role.

We then examine what happens if such NGOs receive external funding. We show that in the presence of increasing marginal cost in service delivery, external and internal funds are subsitute: an increase in external funding reduces the voluntary contribution made by NGO members and promoters. There is crowding-out of voluntary contributions by external funding. In contrast, if marginal cost is decreasing, for instance because of threshold effects or fixed delivery costs, then external and internal funding become complementary.

We then examine the decision by an external donor as to which NGO to fund. We show that donor funding should go to NGOs that are more competent. If donors expect NGOs to be altruistically motivated, the model predicts that funding should go poorer and more altruistic NGOs. The model also suggests that donors should monitor more closely NGOs that raise no internal funds, as this is a sign of self-interested behavior.

Using a representative survey of NGOs in Uganda, we investigate whether these predictions are borne by the data. We find that success in securing grant funding depends primarily on networking, e.g., whether the NGO is member of an NGO network or umbrella organization, whether it is an affiliate of a foreign NGO, and whether the manager works in another NGO. This may be because donors find it difficult to screen local NGOs and tend to rely on networks to access relevant information. Experience matters, but peaks only after three years of existence. Manager characteristics correlated with competence are non significant, and manager experience and wealth reduce the likelihood of obtaining a grant. We also find that donors monitor more closely NGOs that raise no local resources and that they tend to provide grants repeatedly to the same NGOs.

Different factors are associated with raising local resources, either through member fees and donations, through volunteers, or complimentary use of vehicles and equipment. Results suggest that it is very young organizations, often managed by someone who has a regular employment elsewhere, who resort to volunteers and complimentary equipment. Manager experience appears to matter only in raising funds from fees and local donations.

When we use a cross-section analsysis, we find evidence of crowding out: Ugandan NGOs that receive grants raise fewer resources locally. However, when we repeat the same analysis using NGO fixed effects, we obtain a different result, namely that income from member fees increases when an NGO receives more grant funding. Donations from members, in contrast, remain unchanged. This result suggests that grant recipients do not reduce local funding after receiving a grant. The crowding out evidence that comes out of cross-section regressions must be due to a selection effect: donors select NGOs less involved in raising local resources, a finding that is what would happen if donors regard NGOs as (for-profit) sub-contractors of their developmental effort. These findings contradict the reason often given to justify channeling development funds

through non-governmental organizations – namely that they are more altruistic than government agencies and thus are less likely to divert development funds for personal gain.

There may be reasons other than altruism for channeling development assistance through NGOs rather than government agencies. For instance, NGOs may have a lower cost of service delivery, donors may have a better control over spending and activities, or donors may seek to further a philosophical or ideological objective that they could not pursue through secular government agencies.

In the Ugandan case, most NGOs are extremely small and unspecialized (Barr, Fafchamps & Owens 2005). We are therefore doubtful that they offer a lower cost of delivery since they cannot capture returns to scale and to specialization.[19] But because they are more flexible and can be activated faster quickly than government services, NGOs may be well suited for relief operations and for small, localized, or unconventional interventions. This is consistent with Barr, Fafchamps & Owens (2003) who report that Ugandan NGOs focus on relatively light interventions, not on the long term delivery of curative health and full-time education. Tighter financial control may also be a reason for donors to prefer NGOs. Barr, Fafchamps & Owens (2003) have indeed shown that Ugandan NGOs are subjected to numerous forms of monitoring by grant agencies. These issues deserve further investigation.

References

Barr, Abigail, Marcel Fafchamps & Trudy Owens. 2003. *Non-Governmental Organizations in Uganda.* Oxford: CSAE, Oxford University. (Report to the Government of Uganda).

---

[19] This comment does not apply to the Catholic Church, the Church of Uganda, and the Uganda Muslim Supreme Council which are all very active in the delivery of social services, but are not registered as NGO according to Ugandan law.

Barr, Abigail, Marcel Fafchamps & Trudy Owens. 2005. "The Governance of Non-Governmental Organizations in Uganda." *World Development* . (forthcoming).

Edwards, M. & David Hulme. 1995. *Non-Governmental Organizations: Performance and Accountability. Beyond the Magic Bullet.* London: Earthscan.

Fafchamps, Marcel. 2002. Spontaneous Market Emergence. In *Topics in Theoretical Economics.* Vol. 2(1), Article 2 Berkeley Electronic Press at www.bepress.com.

Hulme, D. & M. Edwards. 1997. *NGOs, States and Donors: Too Close for Comfort?* Basingstoke: Macmillan.

Lindelow, Magnus, Ritva Reinikka & Jakob Svensson. 2003. Health Care on the Frontlines: Survey Evidence on Public and Private Providers in Uganda. Technical report Development Research Group, The World Bank Washington DC: . African Region Human Development Working Paper Series.

Platteau, Jean-Philippe & F. Gaspart. 2003. "The Risk of Resource Misappropriation in Community-Driven Development." *World Development* . (forthcoming).

Reinikka, Ritva & Jakob Svensson. 2003. Working for God? Evaluating Service Delivery of Religious Not-for-profit Health Care Providers in Uganda. Technical report World Bank Working Paper No. 3058 Washington: .

Ribar, David C. & Mark O. Wilhelm. 2002. "Altruistic and Joy-of-Giving Motivations in Charitable Behavior." *Journal of Political Economy* 110(2):425–57.

Watson, Joel. 1999. "Starting Small and Renegotiation." *Journal of Economic Theory* 85(1):52–90.

Table 1
Descriptive Statistics, total sample, split by those who have received a grant and those who have not

	Non-Recipient		Recipient		Total			
	Mean	N	Mean	N	Mean	N	T-test	P>|t|
Competence								
Age	41.41	76	41.31	201	41.34	277	0.084	0.933
Education	14.93	75	15.85	207	15.61	282	-2.318	**0.021**
Length of time with NGO	4.69	78	6.89	212	6.30	290	-3.400	**0.001**
Previously worked for NGO	0.49	78	0.44	211	0.45	289	0.774	0.440
Previously worked for Government	0.37	78	0.51	209	0.47	287	-2.052	**0.041**
Current employment with an NGO	0.24	79	0.41	208	0.36	287	-2.670	**0.008**
Current other employment	0.79	79	0.53	212	0.60	291	3.994	**0.000**
Wealth								
Wealthy family	1.79	79	1.79	200	1.79	279	-0.003	0.998
Relative lives abroad	0.36	80	0.44	204	0.42	284	-1.133	0.258
Altruism								
Religious affiliation	0.35	77	0.28	207	0.30	284	1.151	0.251
Female	0.20	80	0.26	215	0.24	295	-0.995	0.320
Other								
Subsidiary of foreign NGO	0.05	78	0.17	215	0.14	293	-2.580	**0.010**
Network	0.51	78	0.79	213	0.72	291	-4.887	**0.000**
Age of NGO	6.41	80	11.14	215	9.86	295	-3.044	**0.003**
Number of staff	86.56	80	98.66	215	95.38	295	-0.138	0.890
NGO wealth	18,960	80	14,561	215	15,754	295	0.427	0.670
Proportion that raise voluntary contributions	0.98	80	0.91	215	0.93	295	1.887	**0.060**

Table 2
Determinants of success in obtaining a grant - with/without manager characteristics

Dependent Variable	1 if received grant, 0 otherwise				Log of grant revenue			
NGO characteristics	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value
Log NGO age	2.170	**4.33**	3.390	**3.97**	5.008	**4.23**	4.592	**2.90**
Log NGO age squared	-0.388	**-2.70**	-0.543	**-3.12**	-0.875	**-2.38**	-0.782	**-1.75**
Religious affiliation	-0.538	-1.31	-0.737	-1.57	-0.299	-0.37	0.325	0.36
Affiliate of foreign NGO	1.261	**1.89**	0.412	0.57	2.940	**2.67**	3.230	**2.60**
Belongs to a network	1.470	**3.49**	1.584	**3.42**	1.484	**1.75**	1.258	1.35
Headoffice in Kampala	0.579	1.34	0.379	0.70	1.831	**2.13**	1.488	1.43
Targets the poor	0.088	0.26	0.252	0.57	-0.244	-0.36	-0.241	-0.30
Manager characteristics								
Female			-0.444	-0.89			0.946	0.97
Log Age of manager			-0.727	-0.60			-1.050	-0.54
Log Education of manager			0.964	1.22			0.953	0.57
Log Length of time with NGO			-0.895	**-1.99**			-0.470	-0.65
Previously worked for Government			-0.052	-0.11			1.104	1.26
Previously worked for another NGO			-1.003	**-2.13**			-1.012	-1.22
Currently works for another NGO			1.605	**2.64**			1.426	1.60
Currently has other employment			-1.012	**-2.11**			-0.945	-1.11
From a wealthy family			-0.740	**-1.89**			0.115	0.17
Relative lives abroad			0.809	1.66			0.578	0.59
Constant	-2.233	-0.37	-0.300	-0.06	-0.513	-0.44	1.135	0.14
R-squared	0.273		0.387		0.312		0.345	
Observations	278		229		190		164	

Table 3
Determinants of success in attracting local funding and resources

Dependent Variable	Log of fees and donations				Proportion of volunteers in workforce				1 if complimentary use of equipment or vehicle			
NGO characteristics	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value
Log NGO age	-0.944	-1.34	-1.200	-1.56	-0.163	**-3.34**	-0.128	**-1.97**	-0.568	**-1.68**	-1.023	**-2.07**
Log NGO age squared	0.059	0.34	0.046	0.23	0.022	1.63	0.010	0.68	0.077	0.80	0.179	1.40
Religious affiliation	0.341	0.54	0.367	0.49	-0.167	**-3.69**	-0.142	**-2.86**	0.170	0.56	0.034	0.10
Affiliate of foreign NGO	-2.435	**-2.69**	-3.148	**-3.68**	-0.193	**-3.00**	-0.186	**-2.77**	0.101	0.26	-0.037	-0.08
Belongs to a network	0.094	0.15	-0.235	-0.36	-0.038	-0.81	-0.007	-0.14	-0.050	-0.17	-0.227	-0.67
Headoffice in Kampala	-2.250	**-3.56**	-1.922	**-2.66**	-0.077	-1.55	-0.015	-0.26	-0.486	-1.52	-0.626	-1.59
Targets the poor	-0.724	-1.38	-0.724	-1.33	-0.076	**-1.88**	-0.089	**-1.98**	-0.284	-1.11	-0.252	-0.83
Manager characteristics												
Female			-0.510	-0.70			0.000	0.00			-0.603	-1.66
Log Age of manager			0.630	0.48			-0.086	-0.77			-0.670	-0.81
Log Education of manager			-1.406	-1.21			-0.074	-0.55			1.400	1.36
Log Length of time with NGO			1.200	**2.28**			0.018	0.51			0.228	0.88
Previously worked for Government			-0.761	-1.23			0.026	0.56			-0.354	-1.09
Previously worked for another NGO			-0.425	-0.77			0.031	0.68			0.336	-1.13
Currently works for another NGO			-0.523	-0.85			0.007	0.14			-0.090	-0.27
Currently has other employment			0.635	1.07			0.148	**3.06**			0.660	**2.18**
From a wealthy family			0.161	0.29			-0.062	-1.46			-0.126	-0.43
Relative lives abroad			-0.576	-0.85			-0.002	-0.05			-0.159	-0.48
Constant	7.879	8.25	8.798	1.56	0.851	16.35	1.292	2.40	0.568	1.43	-0.005	0.00
R-squared	0.254		0.366		0.245		0.305		0.092		0.040	
Observations	190		164		274		225		278		229	

Table 4
Determinants of success in raising volunarty contributions

Dependent variable	Instrumenting regressio 1 if received a grant		IV Log fees & donations		IV Proportion of volunteers		IV 1 if use vehicles & equip.	
	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value
Received a grant (instrumented)			-6.423	**-1.81**	-1.096	**-1.72**	-1.212	**-1.77**
NGO characteristics								
Log NGO age	4.950	**4.98**	1.981	0.94	0.383	1.17	0.339	0.93
Log NGO age squared	-0.094	**-3.71**	-0.558	-1.27	-0.080	-1.32	-0.059	-0.86
Religious affiliation	-0.071	-1.04	-0.045	-0.06	-0.253	**-2.76**	-0.095	-0.85
Affiliate of foreign NGO	0.119	1.30	-2.306	**-2.31**	-0.084	-0.70	0.116	0.78
Belongs to a network	0.206	**3.07**	1.039	1.10	0.225	1.36	0.210	1.13
Headoffice in Kampala	0.094	1.34	-1.278	-1.58	0.035	0.41	-0.082	-0.78
Targets the poor	-0.054	-0.93	-1.063	**-1.77**	-0.060	-0.90	-0.029	-0.34
Manager characteristics								
Female	-0.210	-0.30	0.696	-1.04	-0.030	-0.39	-0.201	**-2.00**
Log Age of manager	-0.176	-1.12	-0.465	-0.35	-0.087	-0.54	-0.259	-1.24
Log Education of manager	0.006	0.05	-1.470	-1.29	0.119	0.64	0.461	**2.16**
Log Length of time with NGO	-0.082	-1.65	0.639	1.07	-0.076	-0.92	-0.055	-0.56
Previously worked for another NGO	-0.128	**-2.25**	-1.283	-1.71	-0.094	-1.02	-0.204	**-1.81**
Currently works for another NGO	0.145	**2.35**	0.454	0.58	0.206	**1.70**	0.188	1.37
From a wealthy family	-0.105	**-1.97**	-0.401	-0.68	-0.137	**-1.70**	-0.100	-1.09
Instruments								
Previously worked for Government	0.096	1.46						
Currently has other employment	-0.057	-0.97						
Relative lives abroad	0.131	**1.98**						
Constant	1.025	1.59	9.725	1.51	1.237	1.80	0.913	1.03
Centered R-squared	0.404		0.282		-0.594		-0.515	
	F(3,146)	p-value						
Joint F-test of instruments	2.54	0.058						
			Chi-sq(2)	p-value	Chi-sq(2)	p-value	Chi-sq(2)	p-value
Overidentification test			0.411	0.814	1.622	0.444	0.687	0.709
			Chi-sq(4)	p-value	Chi-sq(4)	p-value	Chi-sq(4)	p-value
Haussman endogeneity test			1.400	0.237	5.260	0.994	4.300	0.998
Observations	164		164		225		229	

Table 5
Fixed effect estimation

Dependent variable: Revenue from	(1) Fees and donations		(2) Fees		(3) Donations	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
Log grant revenue	0.066	0.98	0.135	2.76	-0.054	-0.89
Year dummy - 2000=1	-0.383	-1.94	-1.070	-0.75	-0.522	-2.93
Overall R-squared	0.12		0.08		0.09	
	p-value		p-value			
F test that fixed effects = 0	0.000		0.000		0.000	
Observations	352		352		352	