The Determinants of Funding to African NGOs[*]

Marcel Fafchamps   Trudy Owens

University of Oxford[†]   University of Nottingham

April 2008

Abstract

Using original Ugandan data collected by the authors, we examine the determinants of funding to local NGOs. 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 some evidence of crowding-out: NGOs that receive grant funding are less likely to obtain resources locally, whether in cash or in kind. But this evidence 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.

JEL codes: O19, O12

Keywords: NGO, Africa, international development assistance, non-profit organizations

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 multilateral donors increasingly seek to channel development funding through local NGOs. Consequently, 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 an 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 difficulty of collecting data on NGOs. Using an instrumental variable approach, we find evidence that grant recipients raise fewer resources locally, notably in the form of member fees and contributions. This is suggestive of crowding-out. But when we conduct a similar analysis using NGO fixed effects, the evidence of crowding-out evaporates. This suggests that grant recipients are NGOs that are, on average, less likely to receive local 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 Ugandan 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

---

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

4

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. Donors seem to understand this well. Survey results indeed indicate that NGOs are subject to extensive monitoring from donors.

Given the increasing importance of the NGO sector in Africa in terms of numbers and funding offered by donors, and given their potential for delivering services to the poor, a thorough analysis of the sector is overdue. Evidence suggests that there has been strong growth of NGOs in this region (e.g. Anheier & Salamon 2006, Wallace, Bornstein & Chapman 2007). Presumably partly in response to this growth, a number of African countries - including Nigeria, Zimbabwe, Kenya and Uganda - have recently implemented new monitoring or regulation frameworks for the sector. This makes this paper pertinent to all African countries seeing growth in this sector. A major reason for the limited work to date is a lack of representative data on the structures, finances and activities of NGOs. Access to such information is extremely difficult due to government sensitivities. The Ugandan government, however, has been willing to support surveys of this sector. Uganda is a good example of a growing and dynamic African NGO sector, and insight into this sector will be able to guide policy throughout the continent.

The paper is organized as follows. We begin in Section 2 by presenting the conceptual framework that underlies our empirical analysis. A simple 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

We are interested in understanding fund-raising by NGOs in developing countries. Barr, Fafchamps & Owens (2005) have shown that, in our study country, most NGO funding comes from inter-

national donors. This implies that in order to understand fund-raising by local NGOs we need to understand what motivates international donors to channel development assistance through local NGOs.

There are several reasons why donors may wish to avoid channelling all their assistance through government agencies – e.g., corruption, instability, ideological and political differences. To bypass the government they can go either through private (for-profit) sub-contractors, or through local not-for-profit NGOs. In the study country, the explosion in the number of local NGOs is such that there are now 20 times as many registered NGOs as they are registered firms. Although many of the registered NGOs only exist on paper, this nevertheless suggests that donors prefer to channel funds through local NGOs than through private firms.[2] The question is why.

One possible reason is that local NGOs have more expertise in delivering the kind of services that donors are interested in. Although this may be important in some cases and needs to be controlled for, the evidence reported in Barr, Fafchamps & Owens (2005) indicates that, in the study country, local NGOs are often quite young. Moreover, most adopt a holistic approach, without any strong specialization by activity or region.

Another possible reason is that channeling funds through not-for-profit organizations prevents development funding from being misappropriated. Here too the evidence provided by Barr, Fafchamps & Owens (2005) casts serious doubt on this assumption. In the studied country, NGOs do not file a tax return and are subject to little or no government scrutiny regarding the possible distribution of profits. Donors do monitor grant recipients, but they could equally do so with for-profit sub-contractors. It is therefore unclear that channelling funds through

---

[2]We do not deny that many registered NGOs have no actual existence and were created in the hope of attracting donor funding that never materialized. Yet, if donors had sought instead to channel funds through registered for-profit firms, the same behavioral process of wishful creation would instead have generated an increase in the number registered firms. This did not happen, suggesting that donors have targeted NGOs – or at least have been consistently perceived to do so.

6

NGOs provides any advantage in this respect.

This leaves one important possibility, namely, that local NGOs are altruistically motivated and thus less subject to moral hazard: if the NGO cares about the welfare of the beneficiaries of development assistance, it is less likely to divert funds. Furthermore, local NGOs may provide a cheaper service because they access manpower, equipment, and buildings at less then market price. Barr, Fafchamps & Owens (2005), for instance, have shown that in the study country many local NGOs employ volunteers and use buildings and equipment on a complimentary basis. They also raise local funding in the form of membership fees and local donations.

Channeling development assistance through charitable organizations is nevertheless subject to another kind of incentive problem which has been dubbed 'crowding out' in the literature. Crowding out arises whenever outside funding induces a reduction in local charitable contributions. For instance, suppose that each \$ of outside funding reduces local contributions by $\delta\$$ with $\delta < 1$. This means that each \$ of outside funding only generates $(1 - \delta)\$$ of additional spending on beneficiaries. Although the mechanism is different, crowding out is similar to fund diversion in that it represents an implicit tax on development assistance.

The two processes are easily embedded within the same stylized model as follows. Consider an altruistic organization, hereafter called the NGO.[3] We think of this organization as made up 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

---

[3]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.

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.

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:[4]

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

where ω is a welfare weight measuring how much the NGO cares about the welfare of its promoters.[5] Let $t(T, z, \omega)$ denote the NGO decision regarding the amount of transfer it makes to target beneficiaries. It is easily shown (see Proposition 1 in appendix) that organizations with

---

[4]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 (e.g. Ribar & Wilhelm 2002, Andreoni & Payne 2003). 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 fund-raising 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. Fund-raising takes time and effort from NGO promoters, thereby subtracting from t. 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 a grant, the opportunity cost of the promoter's time rises, thereby reducing private fund-raising effort. This is another source of crowding out. Again, we can think of $\omega U(T - t)$ as incorporating this effect.

[5]We assume that $U(.)$ is increasing and concave, that is, that the marginal utility of consumption falls with consumption – $U'' < 0$.

more resources (higher T) or more altruism (lower ω) give more – have a higher t – while more competent organizations (higher z) give less.

Whether or not there is crowding out depends on the sign of $\frac{\partial V^2}{\partial t^2}$. If $\frac{\partial V^2}{\partial t^2} < 0$, we show in appendix (see Proposition 2) that the amount given t increases less than proportionally with NGO resources T. There is crowding-out: an addition of G to the NGO resources T translates into less than G additional transfers to beneficiaries. Assuming $\frac{\partial V^2}{\partial t^2} < 0$ is natural whenever the marginal welfare gain falls with t, perhaps because of satiation or because of increasing marginal costs in the production of services.

In contrast, if $\frac{\partial V^2}{\partial t^2} > 0$, external funding has a multiplier effect, i.e., $\frac{dt}{dT} > 1$. This will be the case 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. When this happens, NGO members and promoters respond to external funding by volunteering more of their own resources since they are now more productive in achieving their altruistic goal.

To summarize, whether transfers to beneficiaries increase more or less than proportionally with external resources depends on the sign of $\frac{\partial^2 V}{\partial t^2}$ and, hence, on whether marginal delivery costs are increasing or decreasing. The model is sufficiently general to encompass situations in which crowding-out is so large that part of the external funding G is appropriated by the NGO, i.e., when $t < G$. Since $dt/d\omega < 0$, diversion of funds is more likely if the NGO is less altruistic – as would be the case, for instance, if the NGO is actually a for-profit entity.[6]

The difficulty for donors is to identify NGOs that competent – so that they can provide the service in a cost-effective manner – but also sufficiently altruistic not to divert external funds

---

[6]Therefore ω can alternatively be seen as measuring how little guilt or shame NGO promoters would feel from diverting outside funds. A dishonest promoter would not mind setting $t < G$, thereby diverting outside funds towards personal consumption. Altruism and dishonesty are thus two sides of the same coin.

for personal consumption. 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.

Donors may seek to observe effort t through monitoring. As documented in Barr, Fafchamps & Owens (2005) for Uganda, 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.[7] It is therefore in the interest of donors to economize on monitoring.

This can be accomplished by selecting more altruistic grant recipients. How this can be achieved is unclear, however, because NGOs may seek to portray themselves as more altruistic than they actually are. 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.

Local NGOs may also raise funds locally, either from donations or from user fees. The incentive issues surrounding local donations are similar to those affecting grants from donors. The main difference is that local donors may be better able to observe the NGO's competence z and altruism ω. Contributions from NGO members are an ambiguous category because they may serve the role of payment for service, or user fee. Without going into the details how user fees are set, we note that the 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

---

[7]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.

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 that goes in the direction opposite to crowding out.

2.1. Testing strategy

Our empirical 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 proceed in two steps. We first estimate reduced forms and regress C_i and G_i on various NGO characteristics Q_i that proxy for their competence z, wealth T, and level of altruism ω:

$$C_i = \alpha_0 + \alpha_1 Q_i + u_i \tag{2.1}$$

$$G_i = \beta_0 + \beta_1 Q_i + v_i \tag{2.2}$$

If, as they often claim, donors rely on NGOs' altruism to minimize incentive problems, we expect the same variables to be significant in both (2.1) and (2.2): factors that make it more likely that an NGO raises internal funds should also explain success in raising external funds.

Inference based on comparing (2.1) and (2.2) relies on the absence omitted variable bias. It is conceivable, for instance, that NGOs specialized in different activities may be forced to seek different sources of funding. If local donors are unwilling to fund certain activities, NGOs may have to turn to external donors. To the extent that factors affecting the choice of activity are correlated with characteristics Q, this may confound inference. While this may be a serious concern in other settings, it is unlikely to be a serious source of bias for Uganda. The overwhelming

majority of surveyed NGOs remain unspecialized, adopting a holistic approach to development (Barr, Fafchamps & Owens 2005). So if local funds for certain types of activities were limited, the overwhelming majority of surveyed NGOs could find an activity that fits local interests. In fact, this is precisely what most do with respect to international donors. In our data, the choice of activity is thus best conceived as driven by the availability of funds, not driving it.

Even if NGOs are not altruistic, it may still make economic sense for donors to prefer them over for-profit sub-contractors. This point was initially made by Hausmann (1980) who argues that in markets where the quantity or quality of service cannot be verified, organizations that cannot distribute profits provide a more trustworthy alternative. If external donors regard NGOs as sub-contractors and do not expect NGO promoters to contribute or to raise private funds locally, then only their competence matters; their wealth and altruism are irrelevant to donors. In this case, we expect variables measuring wealth and altruism not to be significant in the external resource regression (2.2) although they may be significant in the internal resource regression (2.1).

Next we seek to test 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 begin by following Ribar & Wilhelm (2002) and Andreoni & Payne (2003) and 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:

$$C_i = \gamma_0 + \gamma_1 G_i + \gamma_2 Q_i + e_i \tag{2.3}$$

Finding $\gamma_1 < 0$ is at prima facie evidence of crowding out.

One difficulty with this approach is the possible presence of endogeneity bias: NGOs that were unsuccessful in raising grant funding may 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 affect grant allocation but not crowding out, such as the factors that affect the probability of receiving a grant independently from beneficiary considerations. One such factor is how connected the NGO is: 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 this are used to instrument access to grants.

Another possible source of bias in (2.3) is the existence of unobserved heterogeneity. To see how this can affect inference regarding crowding out, suppose that donors are attracted to NGOs that are less involved in raising internal or local funds. This could be because such NGOs devote more attention to courting international donors and are more receptive to their needs. In this case, we would observe a negative relationship between C_i and G_i in regression (2.3), even after instrumenting. But this relationship would be due to reverse selection by donors. To investigate this possibility, we estimate an NGO fixed effect version of regression (2.3):

$$C_{it} = \theta_0 + \theta_1 G_{it} + u_i + e_{it} \tag{2.4}$$

taking advantage of the fact that each NGO was asked to provide income statements for two consecutive years. This is equivalent to testing whether an increase in grant income G_{it} from one year to the next is associated with a reduction in internal funds C_{it}. Controls Q_i drop out of the regression because they are time invariant; their effect is captured by the fixed effect u_i.

The different regressions (2.1), (2.2), (2.3) and (2.4) complement each other. Suppose that (2.1) and (2.2) show that altruism affect local fund raising but not success in grant application. Further suppose that we find that $\widehat{\gamma}_1 < 0$ but $\widehat{\theta}_1 = 0$. This implies that there is no crowding-out at the level of individual NGOs: receiving a grant does not reduce local contributions. But since $\widehat{\gamma}_1 < 0$ it also implies that donors allocate grants to NGOs that, on average, collect fewer local contributions and are not particularly altruistic. Over time this may have dramatic implications

for the structure of the NGO industry because donor behavior affects NGO entry. If a charitable purpose and collecting local contributions are not a prerequisite for getting a grant, then newly created NGOs will not be particularly altruistic and will not seek to raise local funds. The NGO sector will reduce to a mere extension of development assistance.

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.[8] A random sample of NGOs was then selected – 100 from the capital city of Kampala and 200 from the 14 rural districts. [9] 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

---

[8] 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.

[9] The overall sampling proportion required to yield a sample of 200 for the districts was calculated by dividing the proposed sample size by the number of NGOs found in the districts during the listing exercise. This sampling proportion was then multiplied by the number of NGOs found in each district separately, yielding a self weighting sample.

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).[10] 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).[11]

The authors themselves were responsible for cleaning the data. Given the heterogeneity of the dataset, a couple of outliers were identified. One NGO is an organization that much older than other NGOs in the dataset. Another is a large international NGO with much more abundant resources. Excluding these outliers does not alter our results in any noticeable way.

4. Empirical analysis

4.1. Univariate analysis

We now proceed with the analysis. Based on the data, we first construct a measure of C_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

---

[10] 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.

[11] 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).

provide financial accounts. But we also have data for the full sample on the number of full-time paid and voluntary staff during last 12 months, and whether the NGO has complimentary use of equipment 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, in Ugandan Shillings. The latter information is only available for the respondents who provided financial data. 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, and whether the manager has a relative living abroad, are used as controls for wealth T. The wealth of the promoter cannot be used directly since it is potentially subject to reverse causation due to crowding-out or fund diversion.

Altruism ω is proxied by a dummy variable that takes value 1 if the NGO has a religious affiliation. It is true that many international donors, being secular organizations, are reticent to facilitate religious proselytizing by funding churches' social activities. It is, however, reasonable to expect religious organizations to be more altruistic, at least towards their followers. This is indeed what the evidence suggests. At the time that the NGO Uganda survey was undertaken, focus group interviews were conducted within the communities that NGOs serve. It was found that if the manager has a religious title, the NGO is more likely to be perceived by the community as altruistic (Barr & Fafchamps 2006). If donors care a lot about altruism, they may thus overcome their secular leanings and choose to operate via religious organizations. This is the approach taken by Reinikka & Svensson (2003) who use religion as a proxy for altruism in their examination of a micro-level dataset on primary health care facilities in Uganda. They find

that 'working for God' matters: workers and managers of religious not-for-profit health care facilities have intrinsic motivations to serve poor people. This seems to be the case in our NGO population as well. The expectation is thus that religious NGOs in Uganda are more altruistic. For this reason, we also expect that religious NGOs are more successful at raising charitable funds locally.

We 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. Finally, we include a number of variables on previous and current work experience as additional measures of competence but also to indicate how well connected the manager is. 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 difference 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

17

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.

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 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. 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 have more stringent monitoring requirements.

4.2. Reduced form regressions

Inference based 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 (2.1) and (2.2). We begin by considering simply the determinants of success in obtaining a grant with only characteristics related to the NGO, excluding the characteristics of the NGO manager/promoter.

Results, shown in the first column of Table 2, report estimates from a probit and 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, and thus rely on networks to identify grant recipients. As pointed out in the conceptual section, this should result in repeated interaction 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. A significantly positive age coefficient obtains if we drop the squared age term. 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. Results are robust to the exclusion of outliers.[12]

Next we include manager characteristics. Results are presented in the second column of Table 2. The results suggest that grant attribution is mostly driven by acquaintance, with no

---

[12]One NGO in our sample has been in existence for over 50 years. If we drop this observation the age squared term is no longer significant in the grant regression, but it remains significant in other regressions. One NGO is an outlier with respect to grant income. Excluding it from the sample makes little difference to our results.

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. In the estimation, we use the log(grant revenue +1) so as not to lose zero observations, and we use a tobit estimator to account for censoring. 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. The only other variable that remains significant is that on current employment with another NGO. NGOs whose manager is employed by another NGO also seem to receive more grant funding.

We then compare these results with those for the raising of internal and local resources. We 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 target 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 associated with success in attracting grant funding are quite different from those associated with raising resources internally or locally. Grant funding seems to be influenced largely by network effects – being an affiliate 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 (2.3). We are interested to find out if NGOs that receive grants generate fewer voluntary donations of time and money. As in Table 3 the dependent variables are: fees and donations; proportion of volunteers; and a dummy for complementary use of equipment and vehicles. The grant variable is a dummy variable that takes value 1 if the NGO ever received a grant.

We begin by regressing the dependent variables on a grant funding dummy and a series of controls. These controls include the same NGO characteristics as in Table 3 as well as a series of manager characteristics. Results, presented in Table 4, show a negative conditional correlation between grants and all three categories of voluntary contributions. The grant variable is significant in the fees and donations regression and nearly significant at the 10% in the volunteers regression.

To address the endogeneity of the grant variable, we need to identify variables that predict grant funding but are conditionally uncorrelated with receiving local donations and resources. In the absence of a controlled or quasi-experiment, we do not have truly exogenous instruments at our disposal. We are therefore condemned to look in the data for suitable instruments.

From the previous section, we have seen that variables which proxy for how socially connected the manager is may serve as instruments since the predict receiving grants but not raising local contributions. We therefore use the following variables as instruments: the length of time the manager has been with the NGO; whether the manager previously worked for the government; whether the manager has other employment; and finally if the manager had a relative living abroad. These variables may help the NGO get the necessary contacts with international donors, but once we control for NGO characteristics they do not appear to help the NGO raise private funds locally. Purely on a priori grounds, however, we cannot entirely reject the possibility that

they do. Results should thus be interpreted with a grain of salt. Given the dearth of evidence on this issue, this is best we can do for now. The instrumenting regression is shown in Table A1 in appendix.[13] The instruments are jointly significant but the F-statistic is below 10, which is symptomatic of a weak instrument problem.

Instrumented regression results for voluntary contributions in cash and kind are reported in Table 5. We estimate an instrumental variable tobit for fees and donations; an instrumental variable linear regression for share of volunteers; and an instrumental variable probit for complementary use of equipment and vehicles. There is a growing literature on coping with weak instruments which recommends the use of corrected confidence intervals. Since our instruments are weak, we report below the estimated t-value the p-value from a corrected likelihood ratio test proposed by Moreira (2001).[14] We also compute a number of specification tests. The exogeneity of the grant variable is rejected in all three regressions.[15] Overidentification restrictions are tested for the second regression, which is linear, and they are not rejected: the Sargan χ^2 statistic has a value of 3.92 and a p-value of 0.271. Admittedly, in the absence of truly exogenous instruments these test results only offer partial reassurance.

Instrumented regression results confirm that grants are negatively 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 for fees and donations and significant at the 5% level for all three dependent variables. Similar results are obtained if manager characteristics are omitted.[16] Despite the difficulty of obtaining the information required for such a test and the absence of

---

[13] Because the number of observations varies across, there are in fact three instrumenting regressions. To save space we only show the one for fees and donations. The other two are qualitatively similar.

[14] To our knowledge, the Moreira p-value correction only exists for linear models. The values reported in Table 5 are thus based on linear implementations of the regressions.

[15] Using a Wald test for the first (tobit) and third (probit) regressions, and a Hausman test for the second (linear) regression.

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

any rigorous evidence on this issue in developing countries, these results provide valuable – if impressionistic – information.

The findings reported in Tables 4 and 5 are consistent with crowding out: NGOs that obtain grant funding appear to raise fewer resources locally. But they may be misleading because they do not control for unobserved heterogeneity. To investigate this possibility, we introduce NGO fixed effects. Respondents were asked to provide retrospective income data for 2000 and 2001. This enables us to estimate model (2.4) and test whether NGOs receive fewer fees and donations from private sources after receiving a grant. Table 6 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. It therefore appears that once we account for unobserved heterogeneity among NGOs, the evidence of crowding-out disappears.

The contradiction between the two sets results suggests that the evidence of crowding-out in Tables 4 and 5 is in fact due to a selection effect: NGOs that are on average more successful at getting grants from international donors are significantly less likely to raise local resources. But once an NGO receives a grant, there is no evidence that it reduces internal funding. If anything, the income it generates from membership fees increases. This is probably because grant revenue enables the NGO to offer more services to members, in exchange of which it receives 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 altruistic contributions – does not fall with grant income, suggesting that crowding out is not present at the level of individual NGOs.

It is possible to imagine alternative explanations for a negative correlation between grants

and local funding without necessarily blaming NGOs' lack of altruism. One is that some NGOs work on a task or issue for which the possibility of raising local funds is limited – think of certain types of advocacy work (e.g., for the environment, women, etc). In order to pursue their specific agenda, these NGOs must turn to grant funding. Although such a phenomenon may arise in certain countries, it is unlikely to account for the pattern observed in our data. The overwhelming majority of surveyed NGOs remain unspecialized, adopting a holistic approach to development (Barr, Fafchamps & Owens 2005). So if local funds for certain types of activities were limited, the overwhelming majority of surveyed NGOs could find in their large portfolio of self-professed interests an activity that suits local benefactors. In fact, this is precisely what most NGO do with respect to international donors.

Another possibility is that NGOs reduce local fund raising in the form of user fee in order to increase beneficiary demand for their services. This could generate a negative relationship between grant funding and income from user fees. As we have seen in Table 5, the opposite occurs: grant recipients collect more user fees, presumably because grant income enables them to undertake activities for which user fees can be collected.

To summarize, the analysis presented here suggests that 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. Combined with our earlier result that proxies for altruism are not correlated with securing 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 in Uganda. Statistically our results are not very strong: the sample size is small and there is a lot of measurement error in the data, making inference difficult. We also cannot rely on a controlled or quasi-experiment to address causal inference issues in a completely convincing way. In spite of these shortcomings, the results nevertheless provide valuable, even if tentative, evidence in an area characterized by an abundance of unsubstantiated claims and a dearth of hard evidence.

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. Variables proxying for manager 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 volunteers, member fees and donations, 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 analysis, 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, the evidence of crowding out disappears. We find instead 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 is probably due to a selection effect: donors select NGOs that are on average 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.[17] But because they are more flexible and can be activated faster 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 over developmental assistance may also be a reason for donors to prefer NGOs. Barr, Fafchamps

---

[17]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.

& Owens (2003) have indeed shown that Ugandan NGOs are subjected to numerous forms of monitoring by grant agencies. These issues deserve further investigation.

Appendix

Proposition 1. *Organizations with more resources (higher T) or more altruism (lower ω) give more – have a higher t – while more competent organizations (higher z) give less.*

Proof. The first order condition and second order conditions for an interior optimum are of the form:

$$
\begin{aligned}
\frac{\partial V(t,z)}{\partial t} - \omega U'(T-t) &= 0 \\
\frac{\partial^2 V}{\partial t^2} + \omega U'' &< 0
\end{aligned}
$$

Using simple comparative statics, we can sign dt/dT, dt/dz and $dt/d\omega$:

$$
\begin{aligned}
\left(\frac{\partial^2 V}{\partial t^2} + \omega U'' \right) dt - \omega U'' dT &= 0 \\
\frac{dt}{dT} &= \frac{\omega U''}{SOC} > 0 \\
\left(\frac{\partial^2 V}{\partial t^2} + \omega U'' \right) dt - U' d\omega &= 0 \\
\frac{dt}{d\omega} &= \frac{U'}{SOC} < 0 \\
\left(\frac{\partial^2 V}{\partial t^2} + \omega U'' \right) dt + \frac{\partial^2 V}{\partial t \partial z} dz &= 0 \\
\frac{dt}{dz} &= -\frac{\frac{\partial^2 V}{\partial t \partial z}}{SOC} < 0
\end{aligned}
$$

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

Proposition 2. *If $\frac{\partial^2 V}{\partial t^2} < (>)0$ the amount given t increases less (more) than proportionally*

with NGO resources T.

Proof. Totally differentiating the first order condition we get:

$$\begin{aligned}\frac{dt}{dT} &= \frac{\omega U''}{\frac{\partial^2 V}{\partial t^2} + \omega U''} \\ &= \frac{1}{1 + \frac{\frac{\partial^2 V}{\partial t^2}}{\omega U''}}\end{aligned} \tag{5.1}$$

It follows that

$$\begin{aligned}\frac{dt}{dT} &< 1 \text{ if } \frac{\partial^2 V}{\partial t^2} < 0 & \tag{5.2} \\ &> 1 \text{ if } \frac{\partial^2 V}{\partial t^2} > 0 & \tag{5.3}\end{aligned}$$

since $U'' < 0$. ∎

References

Andreoni, James & Abigail Payne. 2003. "Do Governemnt Grants to Private Charities Crowd Out Giving or Fund-raising?" *American Economic Review* 93(3):792–812.

Anheier, Helmut K. & Lester M. Salamon. 2006. The Nonprofit Sector in Comparative Perspective. In *The Nonprofit Sector: A Research Handbook*. New Haven: Walter W. Powell and Richard Steinberg (eds), Yale University Press.

Barr, Abigail & Marcel Fafchamps. 2006. "A Client-Community Assessment of the NGO Sector in Uganda." *Journal of Development Studies* 42(4):611–39.

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

Barr, Abigail, Marcel Fafchamps & Trudy Owens. 2005. "The Governance of Non-Governmental Organizations in Uganda." *World Development* 33(4):657-679.

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.

Hausmann, H. 1980. "The Role of Nonprofit Enterprise." *Yale Law Journal* 89:835–901.

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.

Moreira, Marcelo. 2001. Tests with Correct Size when Instruments Can Be Arbitrarily Weak. Technical report Center for Labor Economics Working Paper 37, UC Berkeley Berkeley: .

Platteau, Jean-Philippe & F. Gaspart. 2003. "The Risk of Resource Misappropriation in Community-Driven Development." *World Development* 31(10):1687-1703.

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.

Wallace, Tina, Lisa Bornstein & Jennifer Chapman. 2007. *The Aid Chain: Coercion and Commitment in Development NGOs.* Kampala: Fountain Publishers.

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
Favouritism								
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**
Other								
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

Dependent Variable	1 if received grant, 0 otherwise (probit)				Log of grant revenue (tobit)			
NGO characteristics	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value
Log NGO age	1.282	**4.81**	1.902	**4.49**	8.973	**4.94**	8.516	**3.73**
Log NGO age squared	-0.224	**-2.95**	-0.293	**-3.12**	-1.651	**-3.34**	-1.527	**-2.68**
Religious affiliation	-0.325	-1.46	-0.411	-1.57	-0.391	-0.30	0.685	0.47
Subsidiary fo foreign NGO	0.614	**1.73**	0.137	0.34	3.593	**2.24**	4.168	**2.22**
Belongs to a network	0.828	**3.61**	0.910	**3.65**	2.689	**2.01**	2.549	**1.74**
Headoffice in Kampala	0.333	1.43	0.198	0.68	2.580	**2.00**	2.230	1.52
Targets the poor	0.071	0.38	0.096	0.41	-0.853	-0.79	-0.705	-0.58
Manager characteristics								
Female			-0.242	-0.92			1.102	0.75
Log Age of manager			-0.397	-0.62			-1.183	-0.34
Log Education of manager			0.539	1.20			2.329	0.82
Log Length of time with NGO			-0.505	**-2.19**			-1.018	-0.99
Previously worked for Government			-0.041	-0.17			1.878	1.35
Previously worked for another NGO			-0.542	**-2.26**			-1.727	-1.43
Currently works for another NGO			0.819	**2.75**			2.510	**1.92**
Currently has other employment			0.538	**-2.12**			-1.341	-1.09
From a wealthy family			-0.417	**-2.01**			-0.224	-0.20
Relative lives abroad			0.411	1.60			0.924	0.67
Constant	-1.285	**-4.05**	-0.182	-0.06	-7.227	**-3.31**	-8.222	-0.56
R-squared	0.276		0.387		0.069		0.079	
Observations	278		229		190		164	

Table 3
Determinants of success in attracting local funding and resources

Dependent Variable	Log of fees and donations (tobit)				Proportion of volunteers in workforce (ols)				1if use of equipment or vehicle (probit)			
NGO characteristics	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value
Log NGO age	-2.911	**-2.60**	-3.521	**2.58**	-0.163	**-3.34**	-0.128	**-1.97**	-0.355	**-1.70**	0.637	**-2.17**
Log NGO age squared	0.600	**1.85**	0.652	**1.88**	0.022	1.63	0.010	0.68	0.048	0.81	0.112	1.52
Religious affiliation	0.436	0.48	0.606	0.63	-0.167	**-3.69**	-0.142	**-2.86**	0.110	0.60	0.017	0.08
Subsidiary fo foreign NGO	-4.961	**-3.72**	-5.712	**-3.87**	-0.193	**-3.00**	-0.186	**-2.77**	0.059	0.25	-0.029	-0.11
Belongs to a network	-0.133	-0.15	-0.669	-0.71	-0.038	-0.81	-0.007	-0.14	-0.025	-0.14	-0.138	-0.67
Headoffice in Kampala	-3.777	**-4.08**	-3.050	**-3.15**	-0.077	-1.55	-0.015	-0.26	-0.294	-1.54	-0.371	-0.16
Targets the poor	-1.455	**-1.92**	-1.381	**-1.75**	-0.076	**-1.88**	-0.089	**-1.98**	-0.173	-1.11	-0.146	-0.80
Manager characteristics												
Female			-0.666	-0.68			0.000	0.00			-0.361	**-1.68**
Log Age of manager			0.754	0.36			-0.086	-0.77			-0.436	-0.89
Log Education of manager			-2.076	-0.55			-0.074	-0.55			0.757	1.57
Log Length of time with NGO			1.754	**0.51**			0.018	0.51			0.144	0.92
Previously worked for Government			-0.811	0.56			0.026	0.56			-0.213	-1.08
Previously worked for another NGO			-0.775	0.68			0.031	0.68			-0.207	-1.15
Currently works for another NGO			-0.291	0.14			0.007	0.14			-0.046	-0.23
Currently has other employment			1.204	3.06			0.148	**3.06**			0.414	**2.22**
From a wealthy family			0.386	-1.46			-0.062	-1.46			-0.080	-0.46
Relative lives abroad			-1.447	-0.05			-0.002	-0.05			-0.098	-0.49
Constant	9.433	**7.34**	10.960	2.40	0.851	16.35	1.292	2.40	0.349	1.43	0.357	0.16
R-squared	0.069		0.100		0.245		0.305		0.033		0.019	
Observations	190		164		274		225		278		229	

Table 4
Determinants of success in raising voluntary contributions

Estimator	Tobit		OLS		Probit	
Dependent variable	Log fees & donations		Proportion of volunteers		Use of equip. or vehicle	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
Received a grant	-4.021	**-3.84**	-0.101	-1.61	-0.272	-1.16
NGO characteristics						
Log NGO age	-0.133	-0.11	-0.10	**-1.69**	-0.40	-1.57
Log NGO age squared	0.050	0.15	0.01	0.49	0.07	1.09
Religious affiliation	0.155	0.17	-0.18	**-3.74**	0.03	0.15
Subsidiary fo foreign NGO	-5.293	**-3.71**	-0.18	**-2.78**	0.03	0.12
Belongs to a network	0.421	0.44	-0.01	-0.17	-0.03	-0.15
Headoffice in Kampala	-3.021	**-3.25**	-0.03	-0.44	-0.40	**-1.97**
Targets the poor	-1.798	**-2.32**	-0.07	**-1.67**	-0.10	-0.57
Manager characteristics						
Female	-1.355	-1.44	-0.02	-0.49	-0.39	**-1.85**
Log Age of manager	0.416	-0.24	-0.03	-0.28	-0.29	-0.70
Log Education of manager	-2.372	-1.56	-0.08	-0.59	0.55	1.57
Previously worked for another NGO	-1.451	-1.87	0.00	-0.06	-0.14	-0.78
Currently works for another NGO	0.486	0.58	0.05	1.01	0.10	0.52
From a wealthy family	-0.067	-0.1	-0.05	-1.15	-0.05	-0.34
Constant	18.581	**2.43**	1.25	**2.47**	0.37	0.21
Number of observations	164		229		229	

Table 5
Determinants of success in raising voluntary contributions -- instrumented results

Dependent variable	IV Tobit Log fees & donations		IV OLS Proportion of volunteers		IV Probit 1 use of equip.or vehicle	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
Received a grant	-13.943	**-2.76**	-0.662	**-1.95**	-2.789	**-2.06**
p-value corrected for weak instruments (*)		(0.003)		(0.024)		(0.029)
NGO characteristics						
Log NGO age	4.074	1.59	0.137	0.91	0.559	0.91
Log NGO age squared	-0.782	-1.33	-0.037	-1.20	-0.096	-0.76
Religious affiliation	-0.480	-0.39	-0.217	**-3.30**	-0.214	-0.76
Subsidiary fo foreign NGO	-4.048	**-2.22**	-0.129	-1.49	0.260	0.69
Belongs to a network	2.182	1.45	0.125	1.26	0.440	1.08
Headoffice in Kampala	-1.564	-1.19	0.004	0.06	-0.285	-1.07
Targets the poor	-2.174	-2.14	-0.065	-1.24	-0.079	-0.35
Manager characteristics						
Female	-1.023	-0.86	-0.022	-0.36	-0.537	**-2.02**
Log Age of manager	-0.693	-0.30	0.093	-0.73	-0.781	-1.40
Log Education of manager	-2.010	-1.03	0.031	0.25	1.101	**2.17**
Previously worked for another NGO	-2.814	**-2.40**	-0.046	-0.76	-0.511	**-1.94**
Currently works for another NGO	1.858	1.44	0.139	**1.81**	0.440	1.40
From a wealthy family	-1.027	-1.06	-0.097	**-1.80**	-0.232	-1.05
Constant	22.439	**2.19**	1.331	**2.47**	1.636	0.70
Centered R-squared	0.282		0.019			
Observations	164		229		229	

(*) Based on the conditional likelihood ratio test proposed by Moreira and implemented in Stata using condivreg

Table 6
Fixed effect estimation

Dependent variable: Revenue from	Fees and donations		Fees		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	
F test that fixed effects = 0 p-value	0.000		0.000		0.000	
Number of observations	352		352		352	

Table A1

Instrumenting regression on receiving a grant (*)

NGO characteristics	Coef.	t-value
Log NGO age	4.950	**4.98**
Log NGO age squared	-0.094	**-3.71**
Religious affiliation	-0.071	-1.04
Subsidiary fo foreign NGO	0.119	1.30
Belongs to a network	0.206	**3.07**
Headoffice in Kampala	0.094	1.34
Targets the poor	-0.054	-0.93
Manager characteristics		
Female	-0.210	-0.30
Log Age of manager	-0.176	-1.12
Log Education of manager	0.006	0.05
Previously worked for another NGO	-0.128	**-2.25**
Currently works for another NGO	0.145	**2.35**
From a wealthy family	-0.105	**-1.97**
Instruments		
Log Length of time with NGO	-0.082	**-1.65**
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
Centered R-squared	0.404	
	F-stat.	**p-value**
Joint F-test of instruments F(17,146)	5.81	(0.000)
Observations	164	

(*) To save space only the instrumenting regression for fees and donations is shown.
The results for the other two instrumenting regressions are almost identical,
differing only slightly due to sample size & estimation method.