My Money versus Your Money: An Examination of UK NGOs' Income and Expenditure

(job market paper)

by Pierre Ly*

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Abstract

Non governmental organizations (NGOs) have donated and commercial incomes, and they spend them on both charitable and non-charitable expenditure. Standard economic theory implies that different sources of income are fungible, which means that income elasticities should be the same across income and expenditure categories. This paper seeks to test that assumption using panel data on 72 UK-based international NGOs. I find that changes in donated income primarily affect charitable expenditures, while changes in commercial income sources affect mostly expenditures that relate less directly to NGOs' charitable missions. These findings suggest that NGOs use commercial income to cover expenditures that donors tend to dislike. Furthermore, NGOs use of various income sources seems driven by three main factors: donor-imposed constraints, the tax treatment of their income sources, and a form of mental accounting. The results shed light on both the motivations of NGOs to earn commercial revenues and the way they spend incomes from various sources.

Keywords: charities, non-governmental organizations, income fungibility, mental accounts

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1 Introduction

Self-financing strategies through commercial activities have become common in the nonprofit world. Commercial ventures are a crucial tool for nonprofits, not only to cross-subsidize their charitable programs, but also as a form of self-insurance against the uncertainty of future donations. The present paper sheds light on the case of international development NGOs, and specifically how they allocate charitable and non-charitable revenues. Donors typically hope their money will be directly allocated to the provision of charity, rather than to expenditures less related to NGOs' missions. Given the commercialization of NGOs' income base, one may wonder how NGOs' various sources of income relate to different types of expenditure. Standard economic theory implies that different sources of income are fungible, which means that income elasticities should be the same across income and expenditure categories. This paper seeks to test that assumption using panel data on 72 UK-based international NGOs.

There is an important conceptual difference between donations and commercial income: the former come from the generous support of people who want to encourage the provision of charity, while the latter involve people who buy goods or services. The paper investigates whether this difference affects NGOs' spending behavior. More precisely, do they spend donated and earned income the same way, or does the origin of the money have an impact? To answer this question, I use the panel data to estimate the elasticities of charitable expenditure and other expenditures with respect to different income sources. The data come from the detailed record of UK charities' income and expenditure, published by the Charities Aid Foundation, and the present analysis focuses on international NGOs. This data allow a distinction not only between donated and earned income, but also between different sources of earned income including the sales of donated goods, non-charitable trading (which is the income from selling produced and purchased goods), fees and charges, rental income as well as interest and dividends. Furthermore, I distinguish between three types of expenditures, including direct charitable expenditures (the actual provision of charitable goods and services), support costs (the costs of supervising and assisting charitable programs), and overhead. Spending on the actual provision of charity is the reason why donors contribute. Support costs are necessary complementary expenditures NGOs have to undertake to deliver their charitable services, but donors typically prefer their money to be applied directly to charity, rather than to the associated organizational costs. Overhead represents the administrative costs of NGOs' UK-based headquarters, and are the expenditure categories that relate the least directly to actual charity provision.

The results shed light on important issues regarding NGO financing. I first argue that the relationship between NGOs' incomes and expenditures is partly driven by two factors: (1) donor-imposed contraints and (2) income tax avoidance on the part of NGOs. However, I also show that these two explanations cannot tell the whole story. To reconcile all the findings, I bring in insights from the mental accounting literature, and apply them to NGOs.

First, I find that donated income primarily affects charitable expenditure, while earned incomes such as fees and rental income predominantly affect support costs. Donors often ask that their contributions be spent on goods and services for program beneficiaries, and NGOs certainly advertise such a commitment to elicit more donations. This creates restrictions on the use of donor funds, especially regarding spending outside the direct provision of charity. However, this outside spending includes the necessary support costs. Then, the result that fees and rental income primarily affect support costs suggests that commercial incomes help NGOs cater to donors' preferences while spending on necessary activities that donors value less.

Furthermore, comparing the results regarding unconstrained (earned) sources of income provides additional insights. First, while rental income primarily affects support costs, income earned from interests and dividends is mostly spent on direct charitable expenditure. Both correlations can be explained by a common factor: tax avoidance. Indeed, in the UK, charities' incomes from rents and interest are tax-exempt provided they are applied to a charitable purpose. While donors tend to value direct charitable expenditure, this exemption does not distinguish between the direct provision of charity and its associated support costs. Thus, tax avoidance clearly explains the elasticity of rental income, but it does not explain the difference between the uses of rents and interest. Here, the results suggest non-fungibility. More precisely, NGOs' decisions to allocate these incomes differently (while still avoiding taxation) resembles a form of mental accounting.

The literature on mental accounting has shown that people often label separate income sources according to their origin, and the labels impact the way they spend.[1] I suggest that insights from this literature can help us understand the behavior of NGOs, specifically the surprising effect of interest income. It makes sense for NGO's to consider the interest earned from donations as part of their charitable income. Since most income is donated, a large proportion of interest also originates in

[1] Thaler (1999) provides a survey of this field of research. Several empirical studies shed light on mental accounting at the household level. Duflo and Udry (2004) show that, in Côte d'Ivoire, an increase in the proceeds from yams, a crop whose revenues must traditionally be used to purchase public goods, shift the composition of expenditure towards relatively more education. Kooreman (2000)'s study of Dutch households shows that although there is no legal requirement for the use of child benefits, these benefits affect spending on child clothing more than other income sources.

charitable income. It seems that the constraints placed on donations are also applied in the use of income earned by investing those donations. More generally, the mental accounting framework helps to make sense of my results as a whole. NGOs' income sources are labeled according to their origin, and these labels impact the way different revenues are spent. On the one hand, an increase in an income source that is labeled donated (or charitable) is more likely to affect the direct provision of charity than other expenditures. On the other hand, NGOs' incomes that do not bear this label affect expenditures that donors tend to value less, or even dislike.

The present paper contributes to two strands of literature. First, despite growing interest in the commercialization of nonprofit revenues, most studies continue to operate under the assumption that funding sources are fungible. Various papers have investigated the interactions between nonprofits' income sources. One strand of this literature considers the determinants of nonprofits' investments in commercial activities. Segal and Weisbrod (1998) show that exogenous decreases in donations may lead to more commercial activity, while Bennett et al. (2003) suggest that such activities can act as a form of self-insurance against the uncertainty of future donations.[2] However, analyses of various income sources have thus far failed to consider the important relationship between income and expenditure. By filling this gap, I show that NGOs' commercialization may be a response to constraints placed on the use of donations. Commercial incomes help NGOs pay for expenditures that donors do not value. In addition, my results suggest that the rules regarding taxation of NGOs earned incomes affect their spending behavior.

Second, my results suggest that insights from the mental accounting literature may apply to organizations. In the case of NGOs, the idea that sources of income and expenditure are labeled is particularly relevant. My findings complement the evidence emphasized by the literature in the case of households (Duflo and Udry, 2004, Kooreman, 2000), but also regarding local governments (Hines and Thaler, 1995).

The rest of the paper is divided into 6 sections. Section 2 describes the data in more detail, defines the variables of interest, and presents the empirical strategy. Section 3 presents the main empirical results, and section 4 discusses the factors that may explain the results. Section 5 provides a discussion of the potential reverse causality issue. Section 6 concludes the paper.

[2]Khanna et al. (1995) use an older version of the Charities Aid Foundation data on UK charities and do not find any evidence that automous incomes crowd out donations.

2 The data and empirical method

2.1 Descriptives

In this paper, I focus on international NGOs, that is, UK charities whose primary mission is to provide assistance in relief and development programs in developing countries, and they will be referred to as NGOs throughout the paper.[3] The data come from the detailed record of income and expenditures for charities in the UK, published by the Charities Aid Foundation (CAF) and available on line on Caritas Data's website.[4] International NGOs can be found on the website by refining the search to charities involved in international activities. From the website, 90 international NGOs were found and the data are available for the years 1999 to 2003. However, some NGOs had to be excluded because their accounts were reported without any detail.[5] Then, 74 NGOs were left, but two of them had a total income far above all the others, and were excluded from the analysis.[6] The final sample is an unbalanced panel of 72 NGOs observed between 1999 and 2003.

The detailed record of income compiled by CAF is particularly interesting for the purpose at hand here, since it allows the study of NGOs' autonomous income as a whole as well as a distinction between the various ways NGOs generate it. There are five components. First, NGOs sell donated goods, which generate some profits. A famous example in the UK is that of charity shops operated by NGOs, which sell items such as second-hand books and CDs. A second source of income comes from the sale of purchased or produced goods. For such activities, UK NGOs often create separate trading subsidiaries, that transfer a share of their profits to the mother organization. Such income accruing to NGOs is reported as non-charitable trading. Third, there are the fees and charges that NGOs are paid when they are hired by other organizations or governments to produce various kinds of services. These may include consultancy work, based on the NGO's expertise in a particular field. In addition, NGOs rent out their office space or even own real estate, which generates a rental income. Finally, they earn interest and dividends by investing their funds from the above sources.

Means and standard deviations for income sources are reported in table 1.[7] On average, NGOs received £11.30 million in donated income, and the mean of their total income was £12.41 million.

[3] This includes NGOs that run programs in many fields as well as more specialized NGOs, such as those that focus on emergency relief, health or environmental protection.

[4] http://www.caritasdata.co.uk, accessed in November 2005.

[5] It was the case when only total income and expenditure were reported, without any detail.

[6] Their total income was more than twice the maximum among other NGOs. Including these outliers does not change the main results presented below.

[7] All tables are given in Appendix.

Overall, the average NGO autonomously generated 11 percent of its total income over the period. All 74 NGOs have some income from interests and dividends, which is earned on all their funds and does not refer to a specific additional activity. This is a rather passive source of income. Therefore, in the following, the term active autonomous income (AAI) will refer to autonomous income excluding interest and dividends. Table 2 gives, for each source of AAI, the means and standard deviations conditional on the source being positive, as well as the number of NGOs reporting each type of income over the period 1999-2003. The data reveal that 51 NGOs have a positive net AAI, and such income was on average £0.49 million. Fees and non-charitable trading are the most commonly reported sources of AAI in the sample, followed by rental income and sales of donated goods.

Total expenditure and the shares of each expenditure category are reported in table 3. Expenditures are divided into four categories. First, direct charitable expenditures include spending on the actual provision of charity and grants made (i.e. what many donors hope their money is actually spent on). Second, charitable activities involve so-called support costs, which are (legitimately) considered a part of total charitable expenditures. They include the cost of supervising and assisting the provision of charitable programs overseas, incurred both in the UK and in the field. Third, NGOs spend money on publicity and fund-raising in order to attract donations. Lastly, there is the necessary overhead cost of the headquarters in the UK, including administrative and capital costs (referred to as overhead in the rest of the paper). In the following analysis (and in result tables), the term charitable expenditure will refer to the 'direct charitable expenditures' described above, i.e. the sum of grants made and direct charitable expenditure. On average, 76 percent of NGOs' total expenditure was devoted to such charitable expenditures, 10 percent to publicity and fund-raising, 6 percent to support costs, and 5 percent to pay for overhead in the UK. Although each of these expenditure categories include the associated employee costs, the CAF data only provides the total, reported separately. These costs constitute about 22 percent of NGOs' total spending for the whole sample, but this share is higher for NGOs with positive AAI than for other NGOs.

In addition, table 3 presents a comparison of NGOs with positive AAI with other NGOs that derive their income solely from charitable support. It reveals that, on average, NGOs with AAI seem to be a bit richer and to have more employees. Moreover, although both types of NGOs devote about 10 percent of their total expenditure to fund-raising, support costs and employee costs represent a slightly larger share of total expenditure for NGOs with AAI.

2.2 Empirical method

The goal is to find how changes in different sources of income impact charitable and non-charitable expenditures. Then, the empirical strategy consists of estimating the elasticity of expenditure of type j with respect to income source k, denoted by β_k, for the k's and j's of interest. These elasticities are the key parameters under investigation. The following equation is estimated, for expenditure of type j and income source k in year t:[8]

$$\log expenditure_{j,it} = \sum_k \beta_k \log income_{k,it} + \beta_a age_{it} + \mu_i + \alpha_t + e_{it} \quad (1)$$

The parameters μ_i and α_t respectively capture NGO and year fixed effects. Each source of income is included net of the associated cost of generating it. First, the net income from the sale of donated goods is simply equal to the gross income minus the cost of these sales. Second, net donated income is defined as donated income minus fund-raising expenditures. Third, non-charitable trading income is the amount transfered by the NGO's trading subsidiary. Lastly, for fees and rental income, the data is less clear regarding the costs of generating these revenues. However, I will argue below that the results regarding these incomes are unlikely to be entirely driven by cost recovery.

In the next section, the dependent variables are charitable expenditure, which includes grants and direct charitable spending, support costs, and overhead. Note that support costs and overhead exclude the costs of fund-raising and of selling donated goods, since they have been taken into account to calculate the net incomes generated by these activities.

3 Main results

3.1 Donated versus (active) autonomous income

Table 4 reports the elasticities of my three categories of expenditure with respect to donated income and net active autonomous income (AAI). The dependent variable for the first regression is charitable expenditure, which, as mentioned above, includes spending on the actual provision of charity. The impact of donated income on charitable expenditure is positive and significant, while that of AAI

[8] To avoid dropping observations in the process of taking logs, log (1+x) is used instead of log(x).

is positive but not significant. Furthermore, income from interests and dividends affects charitable expenditure positively, and the effect is similar to that of donated income.

Now, income elasticities of support costs are examined. For this second regression, the elasticity with respect to donated income is still positive and significant but more than four times smaller than the one found in the first column. The coefficient associated with AAI is slightly increased but not significant. Moreover, income from interest and dividends does not appear to be correlated with support costs.

Lastly, looking at the third column, note that none of these income sources is found to affect overhead expenditures.

To sum up, there are three interesting results. First, as you move away from charitable expenditure, the impact of donated income, while remaining positive and significant, decreases. Indeed, an increase in this income source by 10 percent would lead to an increase by 7.35 percent in charitable expenditure, but only 1.47 percent for support costs, while overhead is not affected. Second, changes in AAI do not affect charitable expenditure significantly, but he next subsection shows that analyzing the effect of each component of AAI yields further insights. Third, changes in income from interest and dividends, a passive form of autonomous income, affect direct charitable expenditure but not support costs nor overhead.

3.2 Breaking down AAI

Now, the impact of each component of active autonomous income is analyzed. First, note that donations are the "most charitable" form of income. Second, the sales of donated goods in charity shops, which includes various second-hand items such as books, clothes, and CDS, since it requires that people donate goods to the NGO, can also be considered a charitable source of income, even if it is part of autonomous income (it has a "donated" aspect). Third, non-charitable trading includes such things as selling t-shirts and postcards with the logo of the NGO, and even organic and fair trade food items.

Fourth, fees are received when the NGO charges comsumers of its services, such as when hired for various contracts, based on any expertise it may have to sell. Lastly, among income sources, rental income is the most unrelated to the NGO's mission. Thus, it is possible to classify NGOs' sources of income from the "most charitable" to the "least charitable": donated income, sales of donated goods,

trading, fees and rental income.[9]

Table 5 reports the results of three regressions respectively using the same dependent variables as in table 4. Interestingly, donated and donated goods incomes have a positive impact on charitable expenditures, while other sources of AAI do not appear to have any significant effect. Meanwhile, an increase in donated income by 10 percent would lead to a 7.47 percent increase in charitable expenditure, but only 2.11 percent for other expenditure. In addition, the coefficient associated with the income from sales of donated goods is about three times smaller than the one found for donations. Moreover, as before, income from interest and dividends is found to have a positive and significant impact on charitable expenditures, of the same magnitude as that of donated income.

Furthermore, moving from charitable to support costs, the elasticity with respect to donated income is no longer the highest. Now, the effects of fees and rental income become significant, and are both larger than that of donations. As argued above, rental income may be thought of as the least charitable source of revenue, and interestingly, has the largest impact on support costs, a part of expenditures that relates to NGOs' missions but that donors are likely to value less than direct charitable spending. More precisely, a 10 percent increase in rental income is associated with a 45 percent increase in support costs. A similar increase in fees leads to a 7.8 percent increase in this type of expenditure.

Finally, the high elasticities with respect to interest and dividends found both in table 4 and 5 deserve some attention. Since donations are the dominant source of income for NGOs in the sample, most of the interest is earned from the temporary investment of donated funds. Therefore, the high elasticity found here suggests that these earnings are treated as identical to the funds that were invested to generate them. More discussion on this point is provided in the next section.

4 Interpretation

In this section, I first argue that the results presented above are partly driven by two factors: donor-imposed contraints and corportate income tax avoidance on the part of NGOs. However, I also show that these two explanations cannot tell the whole story. To reconcile all the findings, I bring in insights from the mental accounting literature, and apply them to NGOs.

[9] A similar idea can be found in Leat's (1989) study of the significance of fees and charges in charities. The author views donations and fees "as arranged along a continuum of reciprocity". She points out that donations and fees differ in terms of what is given in return. According to her, donations constitute a "pure gift" and "fees" refer to a "commercial exchange". In his discussion of Leat's paper, Posnett (1989) notes that "the relationship between a donor and a charitable intermediary is always a transaction subject to a contractual obligation on the part of the charity".

The empirical results of the previous section suggest that for NGOs, incomes from different sources are not perfect substitutes. First, donated income has a greater impact on NGOs' charitable expenditure than on support costs, and does not affect overhead. This is good news given the nature of NGOs' missions. Nonprofits, charities and NGOs are often modeled by economists as firms (or individuals) with a high willingness to contribute to a public good, i.e. they are mission-driven (Besley and Gathak, 2005). These widely acknowledged characteristics of NGOs help to explain why increases in donated income affect charitable expenditure more than other expenditures. Moreover, this charitable bias also seems to be reflected in the result that changes in income from interest and dividents, as well as changes in income from donated goods, primarily affect charitable expenditure.[10]

However, the result that revenues such as fees and rental income primarily affect support costs, with no effect on charitable expenditure, seems more difficult to interpret along those lines. After all, if NGOs' preferences are also biased toward charity provision, possibly because their managers are mission-driven, an increase in income, regardless of source, should primarily affect charitable expenditure. However, recall that support costs represent charitable expenditure as well, if more indirectly. They consist of spending necessary to supervise and assist the provision of charitable programs overseas. However, donors often want to know that their money was directly spent on goods or services to beneficiaries, and NGOs certainly advertise such a commitment in their fund-raising campaigns. In other words, NGOs count on the "warm glow" aspect of donors' preferences to elicit more contributions. Then, the results in table 5 seem to indicate that, in order to cover supporting costs of their activities while spending most donations on the actual delivery of charity, NGOs spend earned incomes from rent and fees to cover these costs. Then, the mission-driven aspect of NGO's preferences cannot explain why earned income would primarily affect support costs and not direct charitable expenditure.

The results shed light on two important issues regarding NGO financing. First, they suggest that NGOs' commercialization may be a response to constraints placed on the use of donations. Commercial incomes help NGOs cater to donors' preferences, while spending money on necessary expenditures that donors hope to finance only minimally. Second, one potential concern that NGOs tend to use their money to increase headquarters' overhead does not seem founded, based on the sample used here. Indeed, column 3 in table 5 shows that increases in NGOs' incomes are not associated with significant increases in pure overhead expenditure.

[10]This calls for further research on incomes from sales of donated goods though. More data on income from sales of donated goods would be needed, as only a few NGOs in the present sample report such income. The negative sign in the regression with support costs is rather surprising, but again, here, there is a lack of observations for this income source to provide truly meaningful results.

Now, we still need to understand more precisely what drives the observed relationships between incomes and expenditures. Regarding donations, the story seems clear. The way NGOs spend them comes from the combination of both donors' and NGOs' preferences, and the resulting constraints that NGOs put in place regarding the use of charitable contributions. Donations raised for a specific purpose, like those following the tsunami appeals in 2004, are reported as "restricted", in the sense that they are supposed to be used only for tsunami-related expenditures. Child sponsoring programs, and the commitment to donors that they will regularly receive news about and pictures of the sponsored child, are a way to signal that related donations are used for the intended purpose.

However, the case of commercial incomes is not as clear-cut, since NGOs face no restrictions on the use of incomes that they earn, in contrast with income derived from charitable contributions. First, income from fees may be partly generated to recover support costs. Then, the positive correlation between fees and support costs makes perfect sense, and simply reflects cost recovery through fee for support services, or maybe through membership fees if supporting activities consist of organizing a network of members. This suggests that NGOs' earned income strategies may include charging their local partners in the field to cover the cost of supervision and assistance.

Second, looking at UK charities' tax regulations may help us understand the high positive elasticity of support costs with respect to rental income. The UK charity commission reminds charities that rental income is tax exempt provided it is allocated to a charitable purpose.[11] The same rule applies to income from interest and dividends. Then, since the variables I called "charitable expenditure" and "support costs" are both considered charitable uses of funds, the positive and significant elasticities associated with incomes from rental and interest may reflect tax avoidance on the part of NGOs. However, note that tax avoidance cannot be the whole story here, and we still need to understand why rental income affects support costs while interest income affects the direct provision of charity.

Interest and dividends are earned by investing funds from all sources at times when NGOs are not using them. Since a disproportionate fraction of most NGOs' total income comes from donations, most interest and dividends are earned by investing donated income. As noted above, the combination of donors' and NGOs' preferences translates into constraints on NGOs' use of charitable contributions. Then, the positive and significant elasticity of direct charitable expenditure with interest income may reflect the fact that NGOs place constraints not only on the use of contributions, but also on the interest earned from investing contributions. For example, in Action Aid UK's annual report (2004),

[11] http://www.charity-commission.gov.uk/

it is explained that the interest earned on funds raised for a purpose is credited to these funds.

Rental income, on the other hand, does not come from the charity of donors. It is money that NGOs earn by selling a service. As suggested above, tax avoidance may explain its use on a form of charitable spending. However, this does not explain why it primarily affects spending on supporting activities (supervision and assistance) rather than actual provision of charitable goods and services to beneficiaries. Instead, the different treatments of incomes from rent and interest may reflect non-fungibility. More precisely, NGOs' decisions to allocate these incomes differently (while still avoiding taxation) resembles a form of mental accounting. Mental accounting includes the act of restricting the use of funds based on their origin or purpose, and has been studied in various contexts. One of the early goals of this literature was to challenge the economic principle of fungibility. Some studies focus on households and found evidence that the labeling of income sources affect expenditure patterns (Duflo and Udry, 2004, Kooreman, 2000). Other investigations, such as that of Carriker et al. (1993) in the case of US farms, suggest that labeling of income sources may also apply to firms.

Thus, my results suggest that insights from this literature apply to NGOs. In the previous section, income sources were classified from the "most charitable" to the "least charitable": donated income, sales of donated goods, trading, fees and rental income. In addition, interest and dividends are mostly earned from investing the most charitable source (donated). Then, table 5 suggests that NGOs' income sources are labeled according to their origin, and that these labels impact the way different revenues are spent. On the one hand, an increase in an income source that is labeled donated (or charitable) is more likely to affect the direct provision of charity than other expenditures. On the other hand, the part of NGOs' money that does not bear this label affects expenditures that donors tend to value less, or even dislike. Thus, the interpretation in terms of labels of income and expenditure categories can explain the elasticities found for both donated and earned incomes.

The economic literature on NGOs and nonprofits, however, tends to assume that, absent donor-imposed spending contraints, various income sources available to these organizations are fungible. In Glaeser and Shleifer (2001), as well as in Bennett et al. (2003), revenues from sales and donations simply add up to the nonprofit's income. Fafchamps and Owens (2005), propose a theoretical framework where NGOs' own money and international grants are fungible. Finally, Azam and Laffont (2003) and Azam (2003) model NGOs with one budget constraint, the resource side being the sum of the organizations' endowment and donors' contributions. My results suggest that a complementary approach derived from the mental accounting literature could provide new insights, by reflecting the reality of some

NGOs' management of their financial resources. Shefrin and Thaler (1988) propose a behavioral life-cycle theory to incorporate self-control and mental accounting elements in consumers' intertemporal choices. They assume that wealth is divided into separate mental accounts. Such separation of income sources seems to fit NGOs' behavior.

For the present analysis, the most relevant aspect of mental accounting is the assignment of activities to specific accounts, which can be done either explicitly or implicitly. There are several reasons why NGOs may use separate accounts. NGOs' managers may care about their mission and have ethical considerations regarding donors' contributions. Accounting rules can then act as organization-wide self-control mechanisms to constrain the way donations can be spent. Moreover, the resulting NGOs' "good" spending patterns are publicized and confirmed in annual reports and audits, ensuring future good reputation.

Furthermore, ethical considerations regarding the use of donations may imply that for committed NGO workers, any portion of donated funds spent on non-charitable expenditure produces a disutility. This is the same idea as in Shefrin and Thaler's (1988) model of mental accounts. The authors assume an entry fee (or disutility penalty) for those who finance their current consumption by taking money out of an account that was not supposed to finance such spending. However, earned income sources, like fees and rental income, are less likely to be associated with such values. This helps to explain their disproportionate impact on support costs.

Finally, one may wonder whether the constraints arising from this type of mental accounting are imposed by donors' preferences or by NGOs themselves. Regarding earned incomes and their greater effect on support costs (which donors like less than direct provision of charity), it is clear from the discussion above that if there is an established rule, it only makes sense if it is imposed by NGOs. Now, the case of donations might not be as clear cut. Both donors and NGOs can be thought of as having a preference for the provision of charity. However, a recent study of public trust in charities by Opinion Leader Research (2005) suggest that most donors do not closely verify how their money was spent. The authors point out that "the main factor driving trust is an inherent belief that charities will spend wisely and effectively". Furthermore, another finding in the same report is that "this belief is grounded in faith... as the majority of people do not know how charities are run and most people do not scrutinize charities when they give money". The constraint regarding the use of donations seems to exist to fit the preferences of both NGOs and their donors, even if donors usually trust NGOs to abide by the constraint. In other words, the ways NGOs frame their incomes and expenditures is affected

both by their preferences and those of donors, but once the frames are in place, NGOs will continue to apply the rule without any significant pressure from donors.

5 On the reverse causality issue

So far, I have talked about the results assuming that changes in NGOs' incomes affect changes in their expenditures, and not the other way around. Indeed, there are good reasons to believe that causality will usually run in this direction. First, although NGOs may seek to generate additional revenue and devise strategies based on expected needs, control over income is partial at best and the outcome of their efforts is subject to significant uncertainty.[12] Fund-raising campaigns may not succeed in mobilizing funds, either because money does not flow in as much as expected, or because project costs go over the pre-planned budget. Donors often abandon negotiations unexpectedly, just as changes in political conditions and highly publicized disasters can create unforeseen windfalls of support. Similarly, earned incomes may be affected by factors out of NGOs' control, in particular through the demand for their goods and services.

However, the concern that NGOs' incomes may be endogenous to some extent is still an important one and requires discussion. More precisely, it may be the case that NGOs plan how much they are going to spend on direct charity provision, associated support costs and overhead, and, as a result, decide to generate more or less of various sources of income. Since I lack instrumental variables for NGOs' income sources, I cannot formally quantify how much the results reflect some reverse causality. However, I argue that even if the correlations are in fact partly driven by reverse causality, my main insights regarding NGOs' behavior remain quite similar. All three factors presented above, namely, the restrictions placed on the use of donations, tax avoidance, and mental accounting, still make sense when causality runs the other way. In the rest of this section, let's assume reverse causality, that is, NGOs plan how much they need to spend on each expenditure category, and generate incomes accordingly to finance their plan.

Assume that NGOs plan how much they need to spend on each expenditure category, and run their fund-raising campaigns having pre-committed to those expenditures. Then, the results in table 5 suggest the following interpretation. Knowing how much will be necessary in direct charitable

[12] Uncertainty regarding NGOs' incomes has been widely acknowledged in the literature (Bennett et al., 2003, Fisman and Hubbard, 2005, Weisbrod, 1998)

spending and support costs, NGOs raised donated income accordingly, advertising (and implementing) a restricted use clause that helps gain the trust of donors. Now, table 5 suggests that, in order to help cover support costs, which donors tend to dislike (relative to direct charity provision), NGOs decided to raise more fees and more rental income. Moreover, no income appears to have been raised specifically to increase overhead. Thus, the idea developed in the previous section remains valid: earned income helps NGOs cover the cost of activities that donors tend to dislike, while abiding by restrictions on the use of donations. These restrictions are due to a combination of donors' and NGOs' preferences. Indeed, when NGOs come to donors with their pre-planned spending plan, the donors who decide to contribute are those whose preferences are in line with NGOs' plans.

Then, let's look at the difference between the results regarding rental and interest incomes in the context of reverse causality. Knowing how much needs to be spent, NGOs have generated more rental income as well as invested available funds to earn interest and dividends. Moreover, given the rule that such incomes are tax-exempt provided they are applied to a charitable purpose, NGOs have generated them based on their plan to use them charitably (on direct charity and support costs) in mind. Thus, the tax-avoidance incentive is likely to have played a role in the decision of NGOs to generate those incomes for a charitable purpose.

However, again, tax avoidance does not explain why interest income would be raised as a response to a planned increase in direct charitable expenditure, while rental income would be raised to finance a planned increase in support costs. Even in this reverse causality version of the story, the interpretation in terms of mental accounting still makes sense. NGOs raise more charitable income (donations) when they plan to increase direct charitable expenditure, i.e. spending that donors care about. Since a major fraction of NGOs' total incomes come from donations, interest income is earned on the investment of charitable income, and seems, as a result, to be applied to direct charity spending as well. In other words, interest earned on charitable funds also bears a charitable label, which leads NGOs to generate it when they plan to increase direct charitable expenditure.

Rental income, however, does not bear a charitable label. In the context of reverse causality, the mental accounting intepretation suggests that in order to increase expenditures that donors tend to dislike (like support costs), NGOs raise more non-charitable (i.e. earned) income.

To sum up, even if the observed correlations might reflect some reverse causality, the main lessons still apply. NGOs' use of their income sources seems driven by three main factors: restrictions on the use of donations, arising from both donors' and NGOs' preferences; tax-avoidance; and a form of

resource allocation resembling mental accounting.

6 Conclusion

This paper provides evidence that NGOs do not treat their donated and earned incomes the same way. The results shed light on both the motivations of NGOs to earn commercial revenues and the way they spend incomes from various sources. I find that donated income primarily affects charitable expenditure, while earned incomes such as fees and rental income primarily affect support costs. NGOs' use of their income sources seems driven by three main factors: restrictions on the use of donations, arising from both donors' and NGOs' preferences; tax-avoidance; and a form of resource allocation resembling mental accounting.

The results may be informative for NGO supporters who want to ensure their support directly affects NGOs' beneficiaries. In particular, one may wonder whether helping by buying NGOs' postcards and T-Shirts has the same impact as donating money. My results suggest that whether contributions come from charity or a commercial transaction matters. More precisely, suppose that more shopping at an NGO's trading venture provokes a ten percent increase in the NGO's income from sales of donated goods. Then, according to table 5, charitable expenditure would increase by 2.53 percent, while a similar ten percent increase in donated income would lead to an increase in such expenditure by 7.42 percent. In addition, an increase in non-charitable trading income, which includes selling items such as postcards, T shirts and fair trade food, is not found to have any significant effect on charitable expenditure. So it seems that if one wishes his or her support to be directly connected to the life of poor beneficiaries, donating does a better job than buying from NGO stores.

Self-financing strategies through commercial activities have become common in the nonprofit world. Commercial ventures are a crucial tool for NGOs, not only to cross-subsidize their charitable programs, but also as a form of self-insurance against the uncertainty of future donations. The present paper sheds light on the case of international development NGOs, but local NGOs in the global South face even tougher pressures and resource constraints. They too have become increasingly commercialized. Given the crucial role of local NGOs in contexts of poorly functioning governments, the issue of how types of financing affect their behavior is of major importance for the future of development finance.

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Appendix

Table 1: Variable means

Variable	Mean (numbers in parentheses are standard deviations)
Total income*	12.41 (16.70)
Gross donated income*	11.30 (15.39)
Autonomous income*	1.10 (4.33)
AAI*	0.49 (1.66)
Interest and dividends*	0.23 (0.49)
Autonomous income (share of total income)	0.11 (0.22)
Number of observations (NGO-year)	355

*Amounts in millions of constant 2003 pounds sterling.

Table 2: Sources of AAI

Income source	Fees and charges	Sale of donated goods	Non charitable trading	Rental income	Net AAI
Number of NGOs concerned	30	4	28	11	51
Sub sample means* (standard deviations in parentheses)	1.05 (2.22)	9.26 (12.56)	0.32 (0.89)	0.05 (0.04)	0.90 (2.15)

*Amounts in millions of constant 2003 pounds sterling.

Table 3: Comparison between NGOs with AAI and NGOs with no AAI.

Variable	Mean (numbers in parentheses are standard deviations)		
Sample	All NGOs	with positive AAI	no AAI
Total income*	12.41	13.51	11.00
	(16.70)	(18.38)	(14.20)
Gross donated income*	11.30	11.67	10.84
	(15.39)	(16.38)	(14.06)
Age	25	25	25
	(19)	(18)	(21)
Total expenditure	12.20	13.35	10.71
	(16.34)	(18.21)	(13.51)
Charitable expenditure (share of total expenditure)	0.76	0.74	0.79
	(0.16)	(0.17)	(0.14)
Support costs (share of total expenditure)	0.064	0.07	0.059
	(0.08)	(0.08)	(0.07)
Fund-raising (share of total expenditure)	0.10	0.10	0.10
	(0.10)	(0.09)	(0.12)
Overhead (share of total expenditure)	0.05	0.05	0.05
	(0.05)	(0.06)	(0.04)
Number of employees	153	196	99
	(344)	(419)	(204)
Employee costs (share of total expenditure)	0.22	0.27	0.16
	(0.15)	(0.15)	(0.13)
Number of observations (NGO-year)	355	199	156

*Amounts in millions of constant 2003 pounds sterling.

Table 4: Donated versus autonomous income

Independent variable	Dependent variable		
	Charitable expenditure	Support costs	Overhead
Net donated income	0.735***	0.147**	0.066
	(0.063)	(0.056)	(0.044)
Net AAI	0.146	0.238	0.028
	(0.097)	(0.266)	(0.027)
Interest and dividends	0.713**	-0.194	-0.023
	(0.331)	(0.320)	(0.153)
Adjusted R2	0.981	0.911	0.892
Number of observations (NGO-year)	354	354	354

*** denotes significance at 1%, ** at 5% and * at 10%.
Nuumbers in parentheses are robust standard errors, allowing for clustering at the NGO level.
All continuous variables are in logs. All regressions include NGO and year fixed effects.

Table 5: Breaking down autonomous income

Independent variable	Dependent variable		
	Charitable expenditure	Support costs	Overhead
Net donated income	0.742***	0.185***	0.064
	(0.063)	(0.064)	(0.044)
Sale of donated goods	0.253***	-0.095**	0.029**
	(0.015)	(0.037)	(0.014)
Non-charitable trading	0.037	0.022	0.046
	(0.139)	(0.074)	(0.071)
Fees and charges	0.128	0.781**	0.023
	(0.169)	(0.399)	(0.031)
Rental income	-0.115	4.546**	-0.680
	(0.599)	(2.167)	(0.479)
Interest and dividends	0.707**	-0.0004	-0.050
	(0.353)	(0.195)	(0.156)
Adjusted R2	0.981	0.933	0.918
Number of observations (NGO-year)	354	354	354

*** denotes significance at 1%, ** at 5% and * at 10%.
Nuumbers in parentheses are robust standard errors, allowing for clustering at the NGO level.
All continuous variables are in logs. All regressions include age, number of employees, and NGO and year fixed effects.