# Charitable Dictators? Determinants of Giving to NGOs in Uganda*

Kim Lehrer
Université de Sherbrooke

Catherine Porter
Heriot-Watt University

January 30, 2015

**Abstract**

We play a modified dictator game in Kampala, Uganda with students, civil servants, and individuals from the private sector. The sample includes both Ugandans and expatriates. In the dictator game, participants divide a sum of (real) money (equivalent to approximately $8) between themselves and a local charity. In a "turning a blind eye" treatment, participants are first given the choice of knowing the identity of the recipient. Finally, participants were asked whether they wished to add their own money to the amount of the endowment they chose to allocate to their selected charity. Contrary to many experimental findings, non-students (civil servants) were not significantly more generous than students. In fact, after controlling for demographic characteristics, their average donation was significantly lower than that of students. Only very few individuals donated their own money to the charity, despite 30% of participants donating the full endowment. Attitudes to charities, including the belief that NGOs were doing good work in Uganda, do not predict the amount donated in the expected way.

*Many thanks to Rose Page for excellent fieldwork management, to Sutapa Choudhury for ideas and invaluable discussions, to Christine van Hooft for organizing access to the Ministry of Finance (Kampala, Uganda), to Aggrey Niringiye for assisting in the recruitment of students at Makerere University, to conference participants at the Canadian Economics Association Annual Conference (2014), le congrès annuel de la Société canadienne de science économique (2014), ESA Santa Cruz, and the University of Saskatchewan for helpful comments and suggestions, and to Margaret Stewart and Sarah Adelman for technical assistance.

# 1 Introduction

A growing number of experimental games have been conducted in developing countries investigating the behaviour of the poor (Cardenas and Carpenter, 2008). However, the better-off members of the urban population who are not living in poverty, yet live in a developing country, have rarely been experimental subjects (with the exception of students attending African universities (e.g. Ashraf et al., 2006). This paper is a unique comparison of the behaviour of three different groups of residents of Kampala, Uganda: University students, civil servants, and a group of other urban residents, sampled in locations that are relatively expensive to visit in order to reach those at the higher end of the income distribution. In developed countries, many laboratory experiments in economics have been conducted with students. Criticism of this has led research to compare the behaviour of students with non-student populations (see, for example, Belot et al., 2010; Falk et al., 2013). However, to our knowledge, such a comparison has yet to be conducted within a developing country[1].

Our interest in this subsample of the non-poor living in developing countries stems from the belief that the social preferences and attitudes of the middle class to poverty and charitable giving are interesting and pertinent as development occurs. They may influence voting behaviour, occupational choice and other labour market outcomes, and contributions to voluntary public goods, including charitable giving, all of which have important implications for development. In Uganda, many middle and upper class urban residents (both local and expatriate) frequent upscale cafes, restaurants, and shopping centers in Kampala, as in other African cities, passing slums, hawkers, and beggars. In Uganda, average income is 510 USD per annum and 24% of the population live below the poverty line of 1 USD per day (PPP)[2]. In contrast, in the cafes where our experiment was conducted with "wealthy" urban partici-

[1]Several papers have compared the behaviour of students in developed countries to populations in developing countries, such as Henrich et al. (2001) and related articles, but none have compared students to non-students within a developing country.

[2]Source: http://data.worldbank.org/country/uganda, last accessed 22nd September 2014.

pants, a cup of coffee costs on average 2 USD, which is not dissimilar to the price in US and European coffee shops, where average incomes are much higher.

The setup of the experiment is a dictator game (DG) with a charity recipient. To participants, we did not frame the DG as an experimental game. Rather, we informed them that the research team was giving them a sum of money for their participation in the research and that they could choose whether to give away none, some, or all of the money to a charity operating in Kampala. They received the money and made the choice before completing a questionnaire. This design ensured that questions about poverty and the usefulness of charities would not influence their donation decision. In a "blind eye" treatment, outlined in detail below, participants were given the choice of whether to find out the identity of the third party with whom they were playing the game. This treatment was designed to parallel the experience of living amongst visible poverty, where it may be "easier" to choose to ignore the circumstances of those around you.

We also compare the behaviour of public and private sector workers. Besley and Ghatak (2005) outline a theoretical model whereby workers sort themselves according to "mission", allowing a role for intrinsic motivations or preferences over the work of an organization. Serra et al. (2011) conduct a trust game with health workers in Ethiopia and find that intrinsic (philanthropic) motivation increases the likelihood of working in the non-profit sector. Cowley and Smith (2014) examine correlates of working in the public sector using the World Values Survey. Their overall conclusion is that there is a positive relationship between intrinsic motivation in many of their 51 study countries, but not all. Uganda does not have an entry in the survey but, in nearby Ethiopia and Rwanda, the authors do find a significant positive relationship between being a public sector employee and measures of intrinsic motivation (agreeing that it is important to help others or being active in charity or environmental work). Using our experimental design and by comparing public and private sector employees, we can investigate the relationship between sector of work and chartibale

giving using decisions involving real sums of money.

In addition to our standard DG, at the end of the survey, participants were asked if they wanted to add any of their own money to their donation. To our knowledge, whilst this is a fairly simple treatment, it has not previously been implemented. In the setting of our modified DG with real money and a charity/NGO partner, we do not argue that the dictator game is identical to the circumstances in which people normally find themselves. However, the addition of this final question more closely replicates such situations. Bardsley (2008) notes that, in everyday life, individuals may be asked on a daily basis either to contribute money to a homeless person on the street or to donate to a charitable organization. These situations can be seen as an individual "playing" a dictator game with their own money. Despite almost 85 per cent of subjects giving a positive amount of their windfall gain to their chosen charity and almost 30 per cent of participants giving away the full amount, only 5 per cent (or seven people in a sample of 149) chose to give any of their own funds.

The text is organized as follows. In the next section, we review the related literature pertaining to dictator games. Specifically, we focus on research comparing the behaviour of student and non-student populations, games conducted with charities, and games in which participants can choose to exit the game, which have similarities with our "blind eye" treatment. Section 3 describes the game design in detail and section 4 specifies the five hypotheses we test with our experimental design. Descriptive statistics and results are presented in section 5. Section 6 concludes and outlines potential areas of future research.

# 2 Literature Review

In the dictator game, participants are given an endowment (real or in token form) and asked to divide the amount between themselves and a third party. There is no strategic interaction, and thus no fear of reprisal, as the third party has no agency. Therefore, giving

a non-zero amount has been interpreted as altruism, warm-glow (impure) altruism, or the existence of other regarding preferences, such as, inequality aversion (Fehr and Schmidt, 1999) - though this interpretation is disputed (List, 2007; Bardsley, 2008). Many variants of the game exist. Alternative treatments have been developed with regard to the size of the endowment, the sample of interest, real or token endowments, earned or unearned endowments, initial allocations (giving versus taking), and the identity of the recipient.

Several authors have reviewed the numerous papers employing dictator games, including notably Camerer (2003), Cardenas and Carpenter (2008), and Engel (2011), so in this necessarily brief review, we discuss only those findings that are pertinent to our study. As noted above, our game has a) a charity partner, b) a student and non-student sample, c) an unearned endowment (with the option of giving one's own money), and d) a treatment allowing a costless exit from the DG. Therefore, below, we review the literature that examines differences in results when non-student populations participate, results when the partner is a charity, and games where an exit option is introduced.

## 2.1 Dictator Games in Diverse Populations

Engel (2011) conducts a review and meta-study of hundreds of dictator games and calculates the average donation by dictators across all studies as 28% of the endowment. Regarding the distribution, 36% of dictators give nothing, 16% give half, and just 5% give the full amount. Engel (2011) also finds that when real money is used, the proportion of dictators who give away nothing decreases and the proportion who give away everything increases significantly.

Our study takes place in Uganda and the participants are, likely, much wealthier than those who have thus far been sampled in an African setting. Engel's (2011) meta-analysis finds that "Western" participants are more likely to give zero, but are also more likely to give away everything, than participants from developing countries, though the average amount

given is not significantly different in a meta-regression. Duch and Palmer (2004) find that in Benin, with a sample of non-students, 7.8% give nothing away in a hypothetical dictator situation. Henrich et al. (2005) conduct several games including a DG across a broad range of societies and find that in small-scale societies in Africa and Latin America (Orma in Kenya, Hadza in Tanzania, and Tsimane in Bolivia) almost nobody offers zero and that mean offers are much higher than in ("Western") student studies at 31, 20, and 32 percent respectively.

Whilst most early DG research used a pool of students to recruit participants, some recent studies have also recruited non-students. In the aforementioned meta-analysis, Engel (2011) finds that students do give significantly less than non-students. This is confirmed by Belot et al. (2010) who directly compare the behaviour of students and non-students in a behavioural lab setting. 57% of students give nothing away compared to only 17% of non-students. The average donation of students is 16% compared to non-students' 35%. Falk et al. (2013) find that non-students make significantly more generous repayments than students in trust games.

A multitude of studies have found that giving in dictator games appear to show people as more altruistic than in everyday life. Bardsley (2008) makes the point that"(s)ince we all face the dictator game all day, every day, it could be argued, the experimental design would appear to score highly on conventional standards of ex-ante external validity"(p.123). Levitt and List (2007) outline five crucial peculiarities of laboratory experiments that may lead pro-social behaviour to be significantly different from 'real life' behaviour. "1) the presence of moral and ethical considerations; 2) the nature and extent of scrutiny of one's actions by others; 3) the context in which the decision is embedded; 4) self-selection of the individuals making the decisions; and 5) the stakes of the game." (p.154). We do not see any reason to think that any of these peculiarities would have differential impacts on our three subject types.

In laboratory experiments, whether the money involved in a dictator game is earned

or randomly distributed has been shown to influence behaviour. Smith (2010) provides an overview and examines several assumptions behind economic experimentation that are now generally seen to be unfounded, one of which is that monetary payoffs matter to behaviour, but it should not matter who provides the money or how. Oxoby and Spraggon (2008) find that if dictators earn their endowment, they offer significantly less than if it is simply given to them. The authors also find that dictators offer more if the receiver participates in the earnings process. Carlsson et al. (2013) compares windfall and earned endowments in the lab and in the field and finds, in both cases, that participants donate more in the case of a windfall gain. However, Carlsson et al. (2013) also find other differences between lab and field behaviour, interpreting it as the importance of the environment in determining choices.

Finally, "experimenter demand" effects may lead subjects to contribute more in an experimental setting because they believe that this is what they are supposed to do or because they want to please the experimenter (Carpenter et al., 2008). Both List (2007) and Bardsley (2008) argue that the generosity observed in dictator games may be an artifact of experimentation. Both authors construct treatments which allow dictators to take money away from their partner and show that this leads to a reduction in giving. Bardsley (2008) conducts two games; a dictator game and a second game which introduces the option of taking. He finds that participants choose to walk away with a significantly higher share when allowed to take from their partner. List (2007) expands on the design in order to extract a "moral" cost function (p.485) and finds that when giving and taking options are symmetric (take \$1, receive \$1) those with the option to take, do take significantly more.

Zizzo (2013) criticizes dictator games as being uninformative about altruistic preferences, due among other reasons, to their being easily influenced by such things as framing and experimenter demand effects. In our set-up (described in section 3), the experimenters were three white females aged 30-45, so there is a strong possibility that this may lead to an increase in average giving (Cilliers et al., 2013). However, it is unlikely to explain the differ-

ences in between-subject behaviour observed in our study. Cilliers et al. (2013) vary foreigner presence when conducting behavioural games in Sierra Leone. They find that the presence of a white foreigner increases contributions in a dictator game. Moreover, the impact of the foreigner presence is smallest among participants where the perceived power differential between the player and the experimenter is smallest. Therefore, if similar experimenter demand effects are present in our study, we would expect them to be smallest for our "wealthy" urban participants, and either no different between the Ministry of Finance personnel and the university students, or, if anything, smaller for the civil servants. This would mean that our estimates would if anything underestimate the differential effects between subject types.

## 2.2 Charity Dictator Games

Relevant to this study, Engel (2011), in his meta-study, finds that "deserving recipients" receive considerably larger shares of the endowment. The proportion of those who give the full amount to a charity or an individual described as more deserving rises to 20% from almost zero and those who keep everything reduces to 20% from just under 40%. To our knowledge, Eckel and Grossman (1996) is the first laboratory experiment to replace an anonymous partner with a deserving cause (a charity; the American Red Cross) as the partner. They find that participants are more generous in their contributions to the charity than when paired with an ananoymous peer. The authors also find that women are more generous than men.

Carpenter et al. (2008) further developed this area of research and allowed participants to choose between 13 charities (participants could also choose a charity of their choice if they preferred). Moreover, the study compares students and the "normal community. Their findings suggest that students give more than those in Eckel and Grossman (1996), which the authors attribute to allowing the participants a choice of charities. The authors also find that students, on average, give less than community members. Community members wrote

down their own charity more often than students (interpreted as possibly indicating stronger preferences for charities) and 40% of participants allocated the full amount to the charity (100 USD).

Grossman and Eckel (2012) follow up their earlier work involving dictator games with a charity as a partner. In three treatments, the initial division of the endowment varies. It is given either a) entirely to the dictators, b) to the charity, or c) divided equally between the two. The authors find that the initial allocation of the endowment is irrelevant when comparing the two extreme cases (i.e. the entire endowment to either the dictator or the charity). However, they find that "the initial even split acts, on average, as a powerful focal point" (p.14), meaning that dictators do not tend to deviate far from the initial endowment split. Moreover, treatment a) had significantly less sharing than c) and b). Fong and Luttmer (2011) extend the analysis of charity dictator games with the addition of framing comments to their treatments. In their set-up, the framing includes language that indicated the worthiness of a recipient charity. The authors find that perceived worthiness of the recipients does significantly increase giving to the charity. Small et al. (2007) summarize the evidence demonstrating that people tend to donate more to 'identifiable victims' (i.e. an example of a specific person who would be affected by the donation) rather than statistical victims (e.g. 10,000 people die of X per year). They show that a treatment alerting participants to such heuristic biases does reduce the amount given to the identifiable victims but does not increase the amount given to statistical victims, resulting in an overall reduction in giving.

In summary, the findings of DG games in the existing literature show that playing with real money and partnering with a charity (as well as providing choice in the determination of the charity) elicit higher rates of giving than in a "baseline" laboratory experiment. Hence, *a priori*, we expect students in our sample to behave less generously than non-students and, possibly, for Africans to act more generously than Westerners (though this difference may be difficult to separate from an income effect).

## 2.3 Games with Exit Options

Our experiment also relates to the small literature concerning exit option in dictator games. Dana et al. (2006) allow a "costly exit" option from a dictator game, whereby participants could exercise an option to walk away with less money ($9, rather than a $10 endowment for the dictator game) in exchange for their partner-recipient not receiving the information that they had been part of a dictator game. The authors argue that this option should not change behaviour. Since the dictator game is a one-shot interaction, with no opportunity for reciprocal behaviour (punishment) by the recipient, the decision made does not have any further consequences for the payoff of the subject who plays the role of the dictator than their initial choice of how to split the endowment. However, 28% of participants took the exit option. In a further treatment, the exit option was offered, and, independent of whether or not the exit option was taken, all participants were informed that recipients would not receive information about why they received (any) money[3]. In this treatment, only 1% of dictators chose the exit option. The authors, therefore, conclude that despite predictions of economic behaviour, some people choose to reduce their own payoff in order to avoid appearing selfish to others. Broberg et al. (2007) develop this further and allow participants to decide their reservation price. They find that more generous dictators are more willing to exit.

In our treatment, we aim to test the idea that some wealthy individuals who live in an environment where they are surrounded by substantial poverty, including begging on the street, may be prone to the idea of "turning a blind eye" to the situation. We test whether, when given the option of not receiving any information regarding the recipient, people simply choose to take the money and "not think about it".

Similary, Jacobsen et al. (2011) play one round of a charity dictator game with student

[3]Recipients received their participation fee with a note that said "an additional payment of $ _ is attached to this note".

nurses and real estate students. They then allow a (costly) exit option, whereby the participant is given the option of receiving a payout of less than the full endowment and not having to make a choice concerning sharing with the charity. They find that whilst nurses are more generous than real estate brokers in the first DG, they are also more likely than brokers to take this exit option. The exit option is however only a 50:50 chance (the participant chooses an envelope from a choice of two, one contains the exit, the other contains the same DG). Therefore, the authors cannot separate the role of risk or uncertainty aversion (or the benefits that participants see in a larger choice set) in choosing between the two options. Our treatment is somewhat simpler, as described below, participants are randomly allocated to the "bling eye" treatment, the exit option is not costly, and does not contain an element of risk.

# 3 Game Design and Sample Selection

A sample of 149 participants in Kampala, Uganda participated in the study in March and April 2013. The sample was stratified by sector and potential participants were approached at the Ministry of Finance, the College of Business and Management Sciences at Makerere University, and several relatively upscale cafes in Kampala. Each potential participant was approached by one enumerator and asked if they were willing to participate in a research study. They were then given a one-page document briefly outlining the project. The document was intended to provide sufficient information to enable potential participants to decide whether they wanted to participate in the study.

The document stated that the research is part of an economic study of people living and working (or studying) in Kampala and that the information collected was only to be used by researchers for the purpose of academic analysis. Their participation would take approximately 10 minutes and they would be asked to make some decisions and to complete

a short questionnaire of 2 pages. They were informed that no one, including the researchers, would be able to see their individual responses and that they themselves would place all of their responses in a sealed envelope. The research team would then open the envelope together with others, so no one would be able to identify any individual answers or choices. Moreover, the participant would not be asked for their name and no identifying information about them would be used in the research.

Those individuals who agreed to participate in the study were randomly assigned to one of two treatments. The first treatment is a standard dictator game played with a charity while the second treatment introduces an additional choice by the participant which reveals the identity of the third party with whom they are playing the game. These two treatments are described below.

In the standard treatment, each participant is given an envelope which contains the instructions for their participation. The instructions state that the research team is giving them 20,000 Ugandan Shillings (UGX) for participating in the research project. At the time of the study, 20,000 UGX was equal to approximately 8 US dollars. The 20,000 UGX was placed in an envelope labelled "FUNDS" in 2,000 UGX bills. The instructions then state that the participant is to decide to give none, some, or all of the 20,000 UGX to one charity of their choice from a list of 23 charities operating in Uganda[4] listed on the back of the instruction sheet. The charities include both local and international NGOs operating in Uganda in sectors concerning children, poverty alleviation, human rights, or animal rights, and include both religious and non-religious organizations. Participants placed the amount of money they wished to keep for themselves in the envelope labelled "TAKE WITH YOU" which they took with them at the end of the activity, regardless of whether they had kept any money for themselves. Participants also placed the amount of money they wished to give

[4]The 23 charities were chosen based on previous research conducted by the authors in Kampala. In that study, participants were asked to choose a charity to which they wanted to donate project funds. The 23 most popular charities were included here.

to the charity in the envelope labelled "LEAVE WITH RESEARCH TEAM" and returned it to the research team, regardless of whether they gave any money to a charity, along with the instructions and the completed questionnaire.

In, what we will refer to as, the "identity" treatment, participants were given the same instructions as those in the standard treatment. However, instead of choosing between keeping the money for themselves and giving it to a charity of their choice, the instructions stated that they were to decide to give none, some, or all to a third party. They were also given the option of finding out the identity of the third party, at no cost, by opening an envelope labelled "IDENTITY". If the participant chose to open the "IDENTITY" envelope, the instructions stated that the third party was a charity of their choice from the same list of 23 charities as in the standard treatment. The instructions also stated that even if they chose to open the "IDENTITY" envelope, they were under no obligation to give away any of the 20,000 UGX. This treatment was included in order to analyze the idea that some individuals "turn a blind eye" to the poverty surrounding them by ignoring the problem. Therefore, our hypothesis is that individuals who received the "IDENTITY" treatment would give, on average, less to the charity than those who received the standard treatment. We also analyse the charcteristics of individuals who choose to open the "IDENTITY" envelope, compared to those who do not.

After making their decisions regarding the distribution of the 20,000 UGX, participants completed a brief questionnaire regarding their socio-economic characteristics as well as their attitudes regarding the general performance of charities/non-governmental organizations in Uganda. In addition, those individuals who were randomly assigned to the standard treatment, as well as those who opened the "IDENTITY" envelope, were asked questions regarding their choice of charity. A final question asked participants if they wished to add their own money to the amount already placed in the envelope for the charity. If they chose to do so, they were asked to include this money with the questionnaire when they returned

the envelope containing all of the project documents. This additional question was included to investigate one of the puzzles of dictator games; that people are generally more generous/altruistic in such games than they appear to be in everyday life. One of the proposed explanations for this finding (Bardsley, 2008) is that such dictator games rely on individual choices over a windfall gain and not over their own money. This additional question is relevant only for those participants who chose to give the entire 20,000 UGX to a charity.

# 4 Theoretical Foundations and Hypotheses Regarding the Game Outcomes

In the standard dictator game, where an individual is asked to divide an amount between themselves and an anonymous agent, a self-interested utility maximizing agent as the dictator should keep the full amount. However, results from experimental settings do not support this prediction. As such, individual preferences have been modified to include social preferences; a payoff to the individual from increasing the utility of their anonymous partner. In this section, we extend this theoretical foundation to the dictator game played with a charity. We then present 5 hypotheses regarding the game outcomes based on our theoretical framework.

In our experimental setting (abstracting from the identity treatment), the dictator must decide how much, if any, of the 20,000 UGX unearned endowment to give to the charity of their choice (from the list of 23 charities). In making this decision, the dictator maximizes their expected utility from all of the 11 possible choices.[5] An individual who cares only about their own income would choose to keep the full amount. However, individuals may derive utility from giving to the charity.

Andreoni (2006) outlines four explanations for charitable giving. First, the charity may

[5]The dictator can choose to give 0, 2,000, 4,000, 8,000, 10,000, 12,000, 14,000, 16,000, 18,000, or 20,000 UGX.

contribute to the production of a public good which the individual consumes. For example, in our experimental setting, the dictator may attend the Church of Uganda, one of the charities in our game, and may, therefore, benefit from donations to the charity in the form of improvements to the church building or services.

Second, an individual may donate because of "enlightened self-interest"; the possibility that they will benefit from the charity in the future. For example, the dictator may choose to donate to The Aids Support Organization, another charity in our game, because of the possibility they will need its assistance in the future.

Third, an individual may choose to donate to a charity for purely altruistic reasons; because they get utility from the benefits to others of the donation. In these three cases, the individual cares about the total supply of the charitable good. However, as noted by Andreoni (2006), these three explanations cannot explain giving in situations where either the contribution amount is small so that it is unlikely to significantly affect the quality of the public good or the provision of services (as is likely the case in our experiment) or when there is no possibility for the individual to benefit, either now or in the future, directly from the charity. For example, unless an individual in our sample has or will abandon an animal, they are unlikely to benefit directly from the Uganda Society for the Protection and Care of Animals.

Therefore, a fourth explanation has been proposed to explain such instances of philanthropy; that an individual may get utility simply from the act of giving, often referred to as a "warm glow". This is the most likely explanation for charitable giving in our experimental setting where the amount of the endowment is small when compared to the budgets of the charities and where very few of the charities provide public goods likely to be consumed by our participants. Therefore, we focus on this "warm glow" explanation for charitable giving in the simple framework below.

In our experimental setting, an individual gets utility, $U$, from the amount of the en-

dowment that they keep, $X$, and from the amount they donate, $D$, from the "warm glow" they experience from donating. Their utility with respect to the amount they donate/keep depends on their individual socio-economic characteristics, specifically on their income level, $Y$, and on their preferences around charitable giving, $V$. We denote $U = U(X, D|Y, V)$. Each dictator maximizes their utility by choosing the amount to donate, including zero. Participants face the standard budget constraint for a dictator game where the sum of the amount the individual chooses to keep and the amount they choose to donate must equal the endowment,$E$. The budget constraint is then $X + D = E$. In our "give more?" treatment we allow participants to donate from their own pocket, thus increasing $E$.

Participants maximize their utility by equating the marginal utility of donating with the marginal utility of keeping. We assume diminishing marginal utility to both the amount donated and the amount kept. We also suppose that the marginal utility of $X$ is decreasing in income, $Y$, and that the marginal utility of donating is increasing in some characteristics of attitudes to giving; how positive the participant's opinion is of the effectiveness of their donation, their opinion of charities/their chosen charity, how deserving the recipients are, $V$. We, therefore, assume the following:

- $\frac{\partial U}{\partial X} > 0$,
- $\frac{\partial U}{\partial D} \geq 0$,
- $(\frac{\partial U}{\partial X} \mid \mathrm{Y}{=}\mathrm{Y}_1) > (\frac{\partial U}{\partial X} \mid \mathrm{Y}{=}\mathrm{Y}_2)$ if $\mathrm{Y}_1 < \mathrm{Y}_2$,
- $(\frac{\partial U}{\partial D} \mid \mathrm{V}{=}\mathrm{V}_1) \geq (\frac{\partial U}{\partial D} \mid \mathrm{V}{=}\mathrm{V}_2)$ if $\mathrm{V}_1 > \mathrm{V}_2$.

As noted above, we introduce an "identity" treatment where individuals were given the option of "turning a blind eye" to the identity of their partner in the game. We hypothesize that the addition of this exit option will decrease the amount donated. We think it likely that the participants' priors regarding the identity of their partner are of someone weakly

less worthy than a charity, for example, another individual playing the game. Therefore, we expect the average donation in the subsample of participants who played the game with the exit option to be lower than that of the original treatment. Moreover, we expect this decrease to be driven by those participants who chose to not find out the identity of their partner.

We therefore test the following five hypotheses concerning behaviour based on the theoretical framework described above:

Hypothesis 1: The provision of an "exit option" will decrease the amount donated.

Hypothesis 2: Allowing the amount given to exceed the endowment will increase the amount donated.

Hypothesis 3: An individual's ranking of the charity will be positively correlated with the amount given.

Hypothesis 4: The amount given will be increasing in the perceived 'worthiness' of the recipient.

Hypothesis 5: Amount given will be decreasing in income

To our knowledge, hypothesis 2 has not been previously tested. The most closely related research are games in which subjects "earn" real money in a task and then play a dictator game (e.g. Small and Loewenstein, 2003) where participants complete a survey to earn 5 USD and then play a dictator game). Such studies find that giving is significantly reduced when the endowment is earned (see also literature review above). Allowing this option modifies the budget constraint in the participant's optimization problem described above. To test hypotheses 3 and 4 we use information from the post-game questionnaire related to charitable giving, honesty, worthiness of recipients. We asked all respondents if they agreed or disagreed (and how strongly) with some statements. The first was that " NGOs are doing good work in Uganda.". In addition, for those respondents who played our standard dictator game and those in the "identity" treatment group who chose to find out the identity

of their partner, we asked "On a scale from 1-10 where 1 is very poor and 10 is excellent, how would you rate this charity?". The quality of a charity can be learned by experience with the charity, either directly or indirectly through research on the effectiveness of the charity. Individuals' opinions of the quality of the charity relate directly to how much they believe their donation will help. We also hypothesize that the more people agree with the statement that "Some people are poor through no fault of their own.", the more utility they get from donating. This statement relates to how deserving one believes recipients are of the charity's help (conditional on the charity being related to poverty alleviation).

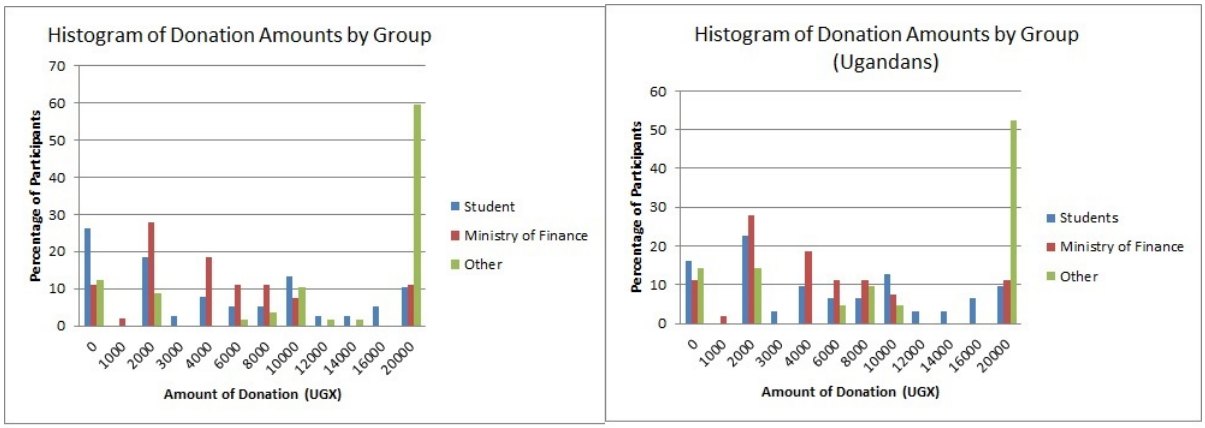
With regard to hypothesis 5, unfortunately, we do not have data on income. However, we do have information on age, a proxy for experience, and occupations; both of which should be correlated with income. We define three occupation categories in our setup: University students, Ministry of Finance personnel, and other. We assume that average income is lowest for students, followed by Ministry personnel. The other category comprises both private and public sector employees, NGO workers, volunteers, and the self-employed. As these individuals were interviewed in relatively upscale cafés, we assume that their average income level is the highest amongst our three categories. As noted in the literature review, almost all studies comparing students to non-students have found them to behave less generously in the DG, so whether this is an income effect or a "student" effect, we would *a priori* expect students give less than non-students.

# 5 Results

## 5.1 Sample Characteristics

As noted above the sample includes Ministry of Finance (MOF) personnel, Makerere University students studying economics, and clients at various cafes in Kampala, and includes both Ugandan citizens and expatriates. In the remainder of the article, we refer to these

Figure 1: Allocations by Group, all participants and Ugandans only




categories as the three groups. All of the MOF personnel are Ugandan, as are most of the Makerere University students. In figure 1, we first present a histogram of the donation amounts by group(left hand panel). The average amount donated overall is just under one-half of the endowment. Moreover, we find substantial variation in the amount donated with many participants giving either zero or 2,000 UGX and many, especially those in the group of non-students/non-civil servants, donating the full amount. As we noted above, there are more non-Ugandans in the non-student non-civil/servant group. We, therefore, present the histogram for the Ugandan sub-sample on the right hand panel. There is a clear difference in the distribution of the non-students/non-civil servants, who give more and are much more likely to give the full amount. The difference between the MOF personnel and students is almost indistinguishable, which we formally test below. Interestingly, many MOF participants give something rather than nothing, if only a small amount, whereas students appear more likely to give nothing[6].

Table 1 summarizes the group status and behavioural decisions from the game across the two randomly assigned game treatments and overall. We refer to those participants who

[6]In a t-test, students are more likely to give nothing than non-students. If we restrict the test to compare students with civil servants, the difference is significant only at the 10% level.

Table 1: Descriptive Statistics by Treatment Status

| | Total | Treatment | Control | Difference |
|---|---|---|---|---|
| Amount Donated | 9,114.09 | 7,568.97 | 10,098.90 | -2,529.94* |
| | (7,886.47) | (7,793.64) | (7,828.80) | |
| Gave Away Full Amount | 0.30 | 0.22 | 0.34 | -0.12 |
| | (0.46) | (0.42) | (0.48) | |
| Kept Full Amount | 0.16 | 0.24 | 0.11 | 0.13** |
| | (0.37) | (0.43) | (0.31) | |
| Student | 0.26 | 0.33 | 0.21 | 0.12 |
| | (0.44) | (0.47) | (0.41) | |
| Ministry of Finance | 0.36 | 0.34 | 0.37 | -0.03 |
| | (0.48) | (0.48) | (0.49) | |
| Other Sector | 0.38 | 0.33 | 0.42 | -0.09 |
| | (0.49) | (0.47) | (0.50) | |
| Observations | 149 | 58 | 91 | |

Notes: * significant at 10%, ** significant at 5%, *** significant at 1%.

were randomly assigned to play the version of the game with the exit option as the treatment group and those who play the standard game without the possibility of an exit option as the control group. 38% of the sample received the identity treatment (55 individuals). The treatment significantly reduced the amount donated, by 2,500 UGX (t-test; p=0.0559, and Mann-Whitney non-parametric test; p=0.0276). The treatment also increased the proportion of participants keeping the full amount, from 11% of the control group to 24% of the treated participants (t-test; p=0.033, Mann-Whitney test; p=0.034).

## 5.2 Regression Analysis

Table 2 presents the results of a regression combining the treatment and group dummies. Column 1 replicates the results of the first row of table 1. With the inclusion of controls for the two groups of non-students, with students as the excluded category, in column 2,

Table 2: Impact of Treatment by Group

| | (1) | (2) | (3) |
|---|---|---|---|
| Treatment | -2,529.94* | -1,903.57 | -2,894.74 |
| | (1,310.87) | (1,154.50) | (2,134.01) |
| Ministry of Finance | | -860.79 | -1,159.44 |
| | | (1,332.19) | (1,876.03) |
| Other Sector | | 7,235.37*** | 6,315.79*** |
| | | (1,519.15) | (2,076.13) |
| Treatment*MOF | | | 459.44 |
| | | | (2,678.55) |
| Treatment*Other | | | 2,263.16 |
| | | | (3,084.36) |
| Constant | 10,098.90*** | 7,399.15*** | 7,894.74*** |
| | (821.69) | (1,239.55) | (1,597.15) |
| R-squared | 0.02 | 0.25 | 0.26 |
| Sample Size | 149 | 149 | 149 |

Notes: Dependent variable is the amount donated (UGX).
* significant at 10%, ** significant at 5%, *** significant at 1%.

the treatment variable becomes just insignificant at the 10% level (p=0.101). The civil servants in the Ministry of Finance do not donate significantly more than students, unlike the other group of "coffee-drinkers" (those recruited in the cafes). In column 3, we include interaction effects between the treatment and group status. Though these interactions are not significant, they are suggestive of the hypothesis that students are more sensitive to the treatment than the non-student/non-civil servant sample. We, therefore, conduct t-tests and Mann-Whitney non-parametric tests for differences in means in each subgroup separately. As in the regression, the two tailed test is not significant for any of the groups. However, in a one-sided t-test (where H1: The treatment reduces the donation amount), both students and MOF personnel show significant reductions in giving (at the 10% level). No effects were found for the other group.

In addition to the data from the dictator game, participants characteristics and attitudes to NGOs in general, and to their chosen NGO in particular, were also collected. Table 3 provides summary statistics of these variables, in addition to the results from the dictator

game, by treatment group, as well as, for the overall sample of participants who completed the questionnaire[7]. With this slightly reduced sample, the t-test for the treatment effect becomes just insignificant, though, as for the subgroups in the full sample above, a one-tailed t-test shows a significant reduction in giving of 2,000 UGX (p=0.084, Mann-Whitney p-value=0.088). The finding that a significantly larger proportion of the treated group keeps the full amount remains significant (24% vs 11%). In terms of the control variables, the average age in the sample is relatively young (32) and education levels are relatively high compared to the Ugandan average. The majority of participants (70%) are Ugandan. As expected, a very high proportion of participants did give something away (over 80%) and the average donation was close to half of the endowment. In terms of the treatment randomization, the only imbalance is in the proportion of students who were treated, which is slightly higher (significant at the 10% level)[8]. We, therefore, control for treatment (and group) in all specifications in our investigation below.

In table 4, we include further participant characteristics in our regression analysis. With the addition of basic controls for gender, age, and nationality (a dummy variable for Ugandan), MOF participants give significantly less, than students even, with a point estimate of over 3,000 UGX. As in the basic analysis, the other sector participants give significantly more than students, by over 5,000 UGX. In columns 2-4, we examine correlations between the amount given and some of the responses to the questions regarding social attitudes. People were asked if they agree with the statement "people are poor through no fault of their own" on a Likert scale of 1-5, a measure of deserving recipient status (as discussed above). The distribution of responses is presented in figure 2 (left hand graphic). Non-Ugandans are much more likely to agree than Ugandans; nearly 60% strongly agree with the statement.

[7]Of the full sample of 149 participants, 26 participants did not fully complete the questionnaire and are, therefore, excluded from the analysis which includes any of these additional covariates.

[8]Students appear to have completed the questionnaire more carefully and, hence, have fewer missing observations.

Table 3: Descriptive Statistics by Treatment Status, detail

Descriptive Statistics by Treatment Status

| | Total | Treatment | Control | Difference |
|---|---|---|---|---|
| Amount Donated | 9,471.54 | 8,093.02 | 10,212.50 | -2,119.48 |
| | (8,064.62) | (8,129.35) | (7,982.09) | |
| Gave away full amount | 0.33 | 0.26 | 0.36 | -0.11 |
| | (0.47) | (0.44) | (0.48) | |
| Kept Full Amount | 0.15 | 0.23 | 0.11 | 0.12* |
| | (0.36) | (0.43) | (0.32) | |
| Female | 0.41 | 0.44 | 0.40 | 0.04 |
| | (0.49) | (0.50) | (0.49) | |
| Non-Ugandan | 0.32 | 0.31 | 0.33 | -0.02 |
| | (0.47) | (0.47) | (0.47) | |
| Age | 32.15 | 30.44 | 33.06 | -2.62 |
| | (10.11) | (9.40) | (10.41) | |
| Student | 0.27 | 0.37 | 0.21 | 0.16* |
| | (0.44) | (0.49) | (0.41) | |
| Ministry of Finance | 0.33 | 0.28 | 0.35 | -0.07 |
| | (0.47) | (0.45) | (0.48) | |
| Other Sector | 0.41 | 0.35 | 0.44 | -0.09 |
| | (0.49) | (0.48) | (0.50) | |
| Completed High School or Less | 0.31 | 0.28 | 0.33 | -0.05 |
| | (0.46) | (0.45) | (0.47) | |
| Undergraduate Degree | 0.46 | 0.51 | 0.42 | 0.09 |
| | (0.50) | (0.51) | (0.50) | |
| Postgraduate Degree | 0.24 | 0.21 | 0.25 | -0.04 |
| | (0.43) | (0.41) | (0.44) | |
| Observations | 123 | 43 | 80 | |

Very few people disagree with the statement. We therefore create a dummy variable for strongly agree (5 on the Likert scale) and include this in the regression in column 2. The coefficient is positive and insignificant, associated with an average increase in giving of just over 3000 UGX.

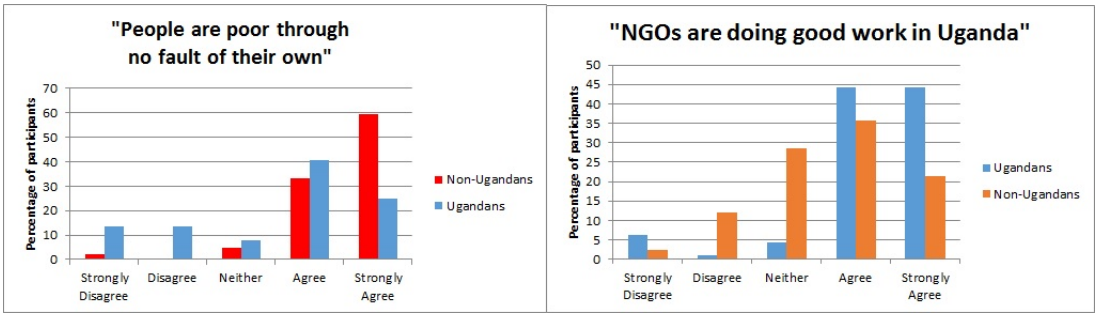
Table 4: Correlates of Amount Donated

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Ministry of Finance | -3,203.95* | | | |
| | (1,902.91) | | | |
| Other Sector | 5,516.45** | | | |
| | (2,219.23) | | | |
| Non-Ugandan | 889.59 | 3,895.23** | 5,983.98** | 5,724.96** |
| | (1,991.84) | (1,541.79) | (2,313.49) | (2,414.13) |
| Female | 1,813.46 | 645.93 | 375.38 | 345.93 |
| | (1,219.25) | (1,307.31) | (1,267.80) | (1,233.63) |
| Age | 173.48** | 120.66* | 83.64 | 55.58 |
| | (71.09) | (61.74) | (63.41) | (66.83) |
| treatment | -1,165.89 | -854.95 | -1,168.27 | -1,300.55 |
| | (1,262.63) | (1,339.29) | (1,277.59) | (1,249.90) |
| People poor no fault (Strongly | | 3,213.66** | 2,653.76 | 2,083.17 |
| Agree) | | (1,533.73) | (2,030.42) | (1,868.44) |
| People poor no fault (Strongly | | | 755.03 | -743.90 |
| Agree) * Non-Ugandan | | | (2,926.89) | (3,105.52) |
| NGOs Do Good (Strongly Agree) | | -4,835.66*** | -2,652.40* | -1,368.82 |
| | | (1,354.69) | (1,586.98) | (1,569.39) |
| NGOs Do Good (Strongly Agree) | | | -8,040.50*** | -7,565.30** |
| * Non-Ugandan | | | (3,011.01) | (3,002.79) |
| Undergraduate Degree | | | | 127.94 |
| | | | | (1,557.14) |
| Postgraduate Degree | | | | 4,769.74** |
| | | | | (2,221.62) |
| Constant | 2,170.26 | 5,135.93** | 5,724.03** | 5,540.56* |
| | (2,358.29) | (2,483.94) | (2,505.00) | (2,886.13) |
| R-squared | 0.30 | 0.27 | 0.31 | 0.35 |
| Sample Size | 122.00 | 120.00 | 120.00 | 120.00 |

Notes: Dependent variable is the amount donated (UGX). * significant at 10%, ** significant at 5%, *** significant at 1%.

Individuals were also asked, on a Likert scale from 1-5, if NGOs were doing good work

Figure 2: Belief in NGOs and Deserving poor




in Uganda. Figure 2 shows the distribution of responses by nationality. Opinions are very positive regarding NGO work, especially among Ugandans. More than 70% of respondents either agree or strongly agree with the statement. Moreover, Ugandans are more likely to agree or strongly agree with the statement. Table 4, column 3, shows that strongly agreeing that NGOs do good work in Uganda is *negatively* correlated with giving. We include an interaction between this variable and non-Ugandan in column 3. This shows the negative relationship as significant for Ugandans, and even stronger for expatriates, though in column 4 when we control for education the effect disappears for Ugandans, showing that that the negative relationship holds for expatriates only.

One possible explanation for this finding is that individuals who believe that NGOs are doing good work in Uganda also believe that they are already well funding and, therefore, donate less. Similarly, individuals who believe that NGOs are not doing good work may do so because they believe that they are not well funded, and therefore, give more in our experiment. Either of these statements, or both, can explain these seemingly counterintuitive results. Unfortunately, we did not collect data on the beliefs of participants regarding the funding adequacy of NGOs in Uganda.

Finally, participants in the control group and those who opened the identity envelope in the treatment group were asked to rank the NGO that they personally chose on a scale

from 1 (very poor) to 10 (excellent). We included this ranking in a regression of the amount donated. The sample size drops due to the participants in the treatment group who chose to not open the envelope, but the ranking of the NGO is not a significant determinant of the amount given.

In table 1, in the simple comparison between the treatment and control groups, we find a significant treatment effect on whether participants kept the full amount (gave nothing). We investigate this further in tables 5 and 6. We then briefly discuss the characteristics of those participants who gave the full endowmment and, in addition, gave some of their own money. In table 5, we present linear probability model results where the dependent variable is a dummy variable which equals one if the participant kept all of the money for themselves and zero otherwise.[9] We find that the treatment is significant and increases the likelihood of keeping the full amount by 0.25, once an interaction term is included between the treatment and group status in order to investigate whether the treatment affects groups differentially. We find that the interaction between the treatment and being interviewed at one of Kampala's cafes is negative and significant (and equal in magnitude to the effect of the treatment effect alone). In addition to these results, we conduct significance tests for the treatment, by group, and find that there is no significant treatment effect for the other group, confirming our regression results. For students, the two tailed test is insignificant, but the one-sided p-value of the treatment effect is significant at the 10% level (p=0.97). For the Ministry of Finance participants, a two-sided t-test and a Mann-Whitney test are both significant at the 5% level (p=0.044 and p=0.045 respectively). In column 3, we add controls for age, gender, nationality, and find that the treatment results are broadly unchanged, further that females are less likely to keep the full amount, as are non-Ugandans.

In table 6, we control for age, gender, nationality, and also include the same set of

[9]In robustness checks, we used probit and logit, and found no significant differences in the results, however for the LPM model, the interactions are easier to interpret.

Table 5: LPM Estimates of Keeping the Full Amount by Group

| | (1) | (2) | (3) |
|---|---|---|---|
| Ministry of Finance | -0.10 | -0.05 | 0.04 |
| | (0.09) | (0.09) | (0.10) |
| Other Sector | -0.10 | 0.03 | -0.05 |
| | (0.09) | (0.10) | (0.12) |
| Treatment | 0.10 | 0.26* | 0.25* |
| | (0.07) | (0.15) | (0.14) |
| Treatment*Ministry of Finance | | -0.08 | -0.06 |
| | | (0.20) | (0.19) |
| Treatment*Other | | -0.33* | -0.41*** |
| | | (0.17) | (0.15) |
| Female | | | -0.19*** |
| | | | (0.06) |
| Age | | | -0.01** |
| | | | (0.00) |
| Non-Ugandan | | | 0.17* |
| | | | (0.09) |
| Constant | 0.19** | 0.12 | 0.33*** |
| | (0.07) | (0.08) | (0.12) |
| R-squared | 0.04 | 0.08 | 0.19 |
| Sample Size | 123.00 | 123.00 | 122.00 |

Notes: Probit estimates, marginal effects reported.
* significant at 10%, ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses.

questions on attitudes to NGOs and poverty, as for the donation regressions in table 4. Female participants are still less likely to give nothing away, and older people are less likely to keep everything. Attitudes towards honesty and NGO performance are insignificant in this case.

Having examined the determinants of keeping the full amount, we now turn to a brief discussion of those individuals who gave their own money to their chosen charity. Recall that the final question of the questionnaire asked participants if they wanted to add some of their own money to that which they had allocated from their endowment. Only seven individuals, or 16% of those that donated the full endowment (4.7% of the total sample), chose to do so. Given this small sample, we are unable to examine the determinants of giving of these additional funds econometrically. However, this is an interesting finding in itself, indicating that people who are "generous" by giving away all of the windfall gain allocated to them in an economic experiment are more generous with such an endowment than with their own money. However, we cannot exclude the possibility that participants felt that 20,000 UGX was already sufficient to give to an NGO. Of the seven individuals who gave their own funds, six were male, six were ugandan (the one female who contributed her own funds was not Ugandan). No students gave their own funds, and only one civil servant did so. These characteristics cannot be tested for significance, given the few positive observations of own contributions, but do seem to reflect the findings of the donation regressions presented above.

# 6 Conclusions

We played a modified dictator game in urban Uganda, with the partner being a charity operating locally in Uganda. Our subjects included university students and non-students, who were located either in the Ministry of Finance or in a cafe or restaurant in Kampala. The

Table 6: LPM Estimates of Keeping the Full Amount (with additional controls)

| | (1) | (2) | (3) |
|---|---|---|---|
| Ministry of Finance | 0.00 | | |
| | (0.10) | | |
| Other Sector | -0.19* | | |
| | (0.11) | | |
| Non-Ugandan | 0.18* | 0.08 | 0.02 |
| | (0.10) | (0.08) | (0.12) |
| Female | -0.18*** | -0.14** | -0.15** |
| | (0.06) | (0.06) | (0.07) |
| Age | -0.01** | -0.01** | -0.00** |
| | (0.00) | (0.00) | (0.00) |
| Treatment | 0.08 | 0.09 | 0.10 |
| | (0.07) | (0.07) | (0.07) |
| Undergraduate Degree | | 0.07 | 0.04 |
| | | (0.07) | (0.08) |
| Postgraduate Degree | | -0.07 | -0.04 |
| | | (0.08) | (0.11) |
| People poor no fault (Strongly | | | 0.03 |
| Agree) | | | (0.10) |
| People poor no fault (Strongly | | | -0.05 |
| Agree) * Non-Ugandan | | | (0.17) |
| NGOs Do Good (Strongly Agree) | | | 0.01 |
| | | | (0.09) |
| NGOs Do Good (Strongly Agree) | | | 0.27 |
| * Non-Ugandan | | | (0.19) |
| Most People are Honest (Agree | -0.04 | | |
| or Strongly Agree) | (0.08) | | |
| Constant | 0.42*** | 0.32** | 0.30** |
| | (0.12) | (0.12) | (0.13) |
| R-squared | 0.13 | 0.11 | 0.14 |
| Sample Size | 122.00 | 122.00 | 120.00 |

Notes: Probit estimates, marginal effects reported.
* significant at 10%, ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses.

average amount donated was somewhat higher than found elsewhere in the literature, which was expected, given the "worthy" recipients. A treatment that allowed participants to "turn a blind eye" by not finding out the identity of their partner in the game did significantly reduce giving by the dictators, but this finding became insignificant when controlling for group differences and individual characteristics. We compared the behaviour of groups within the sample. As noted in the literature review, most studies find that students are less generous in dictator games than non-students. However, in our study, we found that civil servants were significantly less generous than students, by 3,000 UGX, or around 30% of the average donation amount. Other non-students showed the opposite behaviour, being more generous in their giving. We note here interestingly that the students were in the economics department at Makerere, which is where most of the economists within the Ministry of Finance studied. Whilst it is not testable in our context, it is interesting that if we consider a portion of the students as future civil servants, then time spent in the civil service appears to decrease generosity in the game, despite the increase in income.

In terms of attitudes to giving, we found some evidence that those who believed that "people are poor through no fault of their own" were more likely to give more, but that believing NGOs do a good job actually decreased the amount given for non-Ugandans.

Finally, we also offered the option to participants of adding their own money to the donation given, but very few people took that opportunity, despite a large proportion giving their full endowment to the charity, which could mean that people felt UGX 20,000 was a sufficient donation, but also that they treated the "windfall" endowment in the game differently from their own income.

# 7 References

# References


Andreoni, J. (2006). Philanthropy. *Handbook of the economics of giving, altruism and reciprocity 2*, 1201–1269.

Ashraf, N., I. Bohnet, and N. Piankov (2006). Decomposing trust and trustworthiness. *Experimental Economics 9*(3), 193–208.

Bardsley, N. (2008). Dictator game giving: altruism or artefact? *Experimental Economics 11*(2), 122–133.

Belot, M., R. Duch, and L. Miller (2010, October). Who should be called to the lab? a comprehensive comparison of students and non-students in classic experimental games. Discussion Papers 2010001, University of Oxford, Nuffield College.

Besley, T. and M. Ghatak (2005). Competition and incentives with motivated agents. *American Economic Review 95*(3), 616–636.

Broberg, T., T. Ellingsen, and M. Johannesson (2007). Is generosity involuntary? *Economics Letters 94*(1), 32 – 37.

Camerer, C. (2003). *Behavioral game theory: Experiments in strategic interaction*. Princeton University Press.

Cardenas, J. C. and J. Carpenter (2008). Behavioural development economics: Lessons from field labs in the developing world. *The Journal of Development Studies 44*(3), 311–338.

Carlsson, F., H. He, and P. Martinsson (2013). Easy come, easy go. *Experimental Economics 16*(2), 190–207.

Carpenter, J., C. Connolly, and C. Myers (2008, September). Altruistic behavior in a representative dictator experiment. *Experimental Economics 11*(3), 282–298.

Cilliers, J., O. Dube, and B. Siddiqi (2013). 'White Man's Burden'? A Field Experiment on Generosity and Foreigner Presence. Centre for the study of african economies conference paper.

Cowley, E. and S. Smith (2014). Motivation and mission in the public sector: evidence from the world values survey. *Theory and Decision 76*(2), 241–263.

Dana, J., D. M. Cain, and R. M. Dawes (2006). What you dont know wont hurt me: Costly (but quiet) exit in dictator games. *Organizational Behavior and Human Decision Processes 100*(2), 193–201.

Duch, R. M. and H. D. Palmer (2004, August). Its not whether you win or lose,but how you play the game: Self-interest, social justice, and mass attitudes toward market transition. *American Political Science Review 98*(3), 437–452.

Eckel, C. C. and P. J. Grossman (1996, October). Altruism in anonymous dictator games. *Games and Economic Behavior 16*(2), 181–191.

Engel, C. (2011). Dictator games: a meta study. *Experimental Economics 14*(4), 583–610.

Falk, A., S. Meier, and C. Zehnder (2013). Do lab experiments misrepresent social preferences? the case of self-selected student samples. *Journal of the European Economic Association 11*(4), 839–852.

Fehr, E. and K. M. Schmidt (1999). A theory of fairness, competition, and cooperation. *Quarterly journal of Economics*, 817–868.

Fong, C. M. and E. F. Luttmer (2011). Do fairness and race matter in generosity? evidence from a nationally representative charity experiment. *Journal of Public Economics 95*(5), 372–394.

Grossman, P. J. and C. C. Eckel (2012, September). Giving versus taking: A real donation comparison of warm glow and cold prickle. Monash Economics Working Papers 40-12, Monash University, Department of Economics.

Henrich, J., R. Boyd, S. Bowles, C. Camerer, E. Fehr, H. Gintis, and R. McElreath (2001). In search of homo economicus: behavioral experiments in 15 small-scale societies. *American Economic Review*, 73–78.

Henrich, J., R. Boyd, S. Bowles, C. Camerer, E. Fehr, H. Gintis, R. McElreath, M. Alvard, A. Barr, J. Ensminger, N. S. Henrich, K. Hill, F. Gil-White, M. Gurven, F. W. Marlowe, J. Q. Patton, and D. Tracer (2005, 12). "economic man" in cross-cultural perspective: Behavioral experiments in 15 small-scale societies. *Behavioral and Brain Sciences 28*, 795–815.

Jacobsen, K. J., K. H. Eika, L. Helland, J. T. Lind, and K. Nyborg (2011). Are nurses more altruistic than real estate brokers? *Journal of Economic Psychology 32*(5), 818–831.

Levitt, S. D. and J. A. List (2007). What do laboratory experiments measuring social preferences reveal about the real world? *The Journal of Economic Perspectives 21*(2), pp. 153–174.

List, J. A. (2007). On the interpretation of giving in dictator games. *Journal of Political Economy 115*(3), 482–493.

Oxoby, R. J. and J. Spraggon (2008). Mine and yours: Property rights in dictator games. *Journal of Economic Behavior & Organization 65*(3), 703–713.

Serra, D., P. Serneels, and A. Barr (2011). Intrinsic motivations and the non-profit health sector: Evidence from ethiopia. *Personality and Individual Differences 51*(3), 309–314.

Small, D. A. and G. Loewenstein (2003). Helping a victim or helping the victim: Altruism and identifiability. *Journal of Risk and Uncertainty 26*(1), 5–16.

Small, D. A., G. Loewenstein, and P. Slovic (2007). Sympathy and callousness: The impact of deliberative thought on donations to identifiable and statistical victims. *Organizational Behavior and Human Decision Processes 102*(2), 143–153.

Smith, V. L. (2010). Theory and experiment: What are the questions? *Journal of Economic Behavior & Organization 73*(1), 3–15.

Zizzo, D. J. (2013). Do dictator games measure altruism? In L. Bruni and S. Zamagni (Eds.), *Handbook of the economics of giving, altruism and reciprocity: Foundations*. Edward Elgar.