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Leonardo Becchetti, *Università di Roma Tor Vergata*
Vittorio Pelligra, *Università di Cagliari*

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Information and belief elicitation effects on charitable giving:

An artefactual field experiment.

Leonardo Becchetti[+] Vittorio Pelligra[°]

University of Rome-Tor Vergata *University of Cagliari*

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Abstract[*]

We examine by means of an artefactual field experiment on a representative sample of Italian adults, the impact of information and belief elicitation on charitable-giving when donors know (or express their beliefs on) what the organizations received in terms of aggregate donations in the past. We find that both effects are significant in terms of increase in the share of donors to a health related (bone narrow transplant) organization. The observed findings are consistent with expressed health wellbeing preferences of donors and with the gap between the organization position in the ranking of aggregate donations (last) and the far higher expected position of the same organization in donors' beliefs. The effect is robust also in gender and age sample splits. Inequity aversion and warm glow depending on the expected marginal benefit of increased donations to the specific charity are two observationally equivalent explanations for our findings. Another related consequence of information disclosure is that the share of participants deciding not to donate at all becomes significantly lower when information on aggregate past donations is provided.

Keywords: altruism, warm glow, strategic information, charitable-giving, artefactual field experiment.

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[+] Department of Economics, University of Rome Tor Vergata, Via Columbia 2, 00133 Rome. E-mail: becchetti@economia.uniroma2.it.

[°] Department of Economics and Business, University of Cagliari. V.e S.Ignazio 17, 09123 Cagliari (Italy). E-mail: pelligra@unica.it.

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1. Introduction

Charitable-giving and fundraising represent, in most of the advanced economies of the World[1], the supply- and the demand-side of a 'vibrant industry' (Landry *et al.*, 2010). In the U.S. alone, where such an 'industry' is particularly blossoming, in 2011, 88% of households gave to charity $2,213 on average, while the median was $870 for an estimated total "pie" of $298.42 billion. In the same year, the largest source of donations came from individuals at 73% of total giving, followed by foundations (14%), bequests (8%), and corporations (5%) (Giving America, 2012). Charitable giving accounted for 2% of gross domestic product in 2010. These figures show an increasing trend in despite the economy's still high volatility and the consequent uncertain outlook.

From the economist's standpoint we give for instrumental reasons, to contribute to the provision of public good that would possibly benefit us, but also out of intrinsic motivations, because we value the very act of giving. When we give, in fact, we experience a 'warm glow' (Andreoni, 1989, 1990) a sort of internal satisfaction as shown by recent neuroeconomic studies that find a correlation between the act of giving, mandatory or voluntary, and the activation of brain areas linked to reward processing (Harbaugh *et al*., 2007). We also give because we dislike inequality (Fehr and Schmidt, 1999), because we have inherited by our ancestors a tendency to comply with the norms of direct and indirect reciprocity (Rabin, 1993; Nowak and Sigmund, 2005) and our decision to give is affected by a large number of material, cultural, relational and psychological factors (Konow, 2010; Engle, 2011).

More specifically, voluntary donations to the non-for-profit sector contribute to the production of public goods, from health, to education, culture, civil rights and environmental protection. Empirical and experimental studies on the 'demand-side', focused on the factors affecting giving, have found that revealing the identities of givers have positive effects on the willingness to give and on the amount given (Rege and Telle, 2004; Andreoni and Petrie,

[1] Emerging economies are catching-up in global philanthropy at a sustained peace. According to the *2013 Index of Global Philanthropy and Remittances* (The Hudson Institute, 2013), in fact, China, India, Brazil, and South Africa alone account for $103 billion in private flows compared to $577 billion from the 23 developed donor countries. More than 95% of these financial flows are private, and less than 5% is government aid, a higher private proportion than developed countries.

2004). Practices involving 'seed money', that is, requiring that a minimum amount of contributions to be reached before a new project can be pursued have a significant and positive effect (List and Lucking-Reiley, 2002; Andreoni, 1998). A third effective technique is to guarantee refunding the donors in the event that the necessary amount of donations is not met (Bagnoli and Lipman, 1989). Landry, *et. al*, (2006), find that also the use of lotteries can increase donations while Morgan (2000) points-out the effectiveness of the door-to-door solicitations, especially by physically attractive fund-raisers.

Also a 'matching-grant' mechanism can be an effective way to encourage donations (Karlan and List, 2007). Such a mechanism considers donations conditional on other donations. In a $1:$1 grant scheme, for every dollar donated, the matching donor contributes another $1 and the charity receives $2. In the $2:$1 scheme, for every dollar donated, the matching donor contributes $2, and the charity receives $3, and so on. The matching-grant mechanism works by changing the 'price' of giving for the individual donors.

Many studies focused on the issue related to the effect of changes in 'price' and the giving responses. To identify the effect of 'price' changes on donations and the associated elasticity of giving is especially important from the policy makers' perspective. Since, in fact, charitable giving favors the production of public goods that the public sector might want to encourage, donations can subsidize it by, for instance, tax deductibility, as it happens in many fiscal systems around the world. However, such a way to increase donations only works if the marginal cost, in terms of foregone revenues, is less than the marginal benefit coming from the additional donations. This cost-benefit ratio will be favourable only if if giving is 'price elastic', that is, if the price elasticity of giving is less than -1. From the seminal study of seminal work of Feldstein and Clotfelter (1976), economist debated the value of the elasticity using different data and methods and finding contrasting evidence. In the recent years, however, although not unanimous, a widespread consensus has emerged around the fact the, indeed, the "that charitable giving is at least unitary price elastic if not price elastic, especially amongst the high-income classes" (List, 2011, p. 172).

The tax-deducibility represents, therefore, a strong incentive to donate as it lowers the cost of giving to the preferred organization. In the U.S., for this reason, the price of charitable giving is inversely related to the marginal tax rate; that implies that those with higher incomes get higher marginal subsidies. In the U.K. a similar logic applies to the payroll giving (Give as You Earn). In this system donations are removed before income tax is calculated and deducted. The consequence is that tax is calculated on a lower amount and also by changing

individual's tax bracket the deduction may lower the amount of tax to pay.

There are, however, fiscal systems even more generous, where the tax deductibility appears in extreme forms. The Italian 5X1000 (five by thousand), introduced in 2006, for instance, permits the taxpayers to donate each year to their preferred organization[2] a share equal to the five per thousand of their personal income tax. In this way the State finances the not-for-profit sector forgoing a certain amount of tax revenues and delegating to the taxpayer the control on how to allocate this public fund among the different organizations. This represents an extreme form of 'price' reduction with the actual price set equal to 0. However if total donations exceed the threshold set for any given year (400mls of euros in the 2013), only a fraction of each donation is, actually distributed, to a sum equal the fixed amount.

Although not as much as in the U.S., even in European countries, that historically have relied more heavily on the public finances, the private funding and the voluntary contributions are becoming always more important for the provision of public goods and services in times of shrinking government budget constraints. We need, also for this reason, to know more and to understand more deeply how people behave in this domain and which factors may affect their willingness to give. In this sense laboratory and especially field experiments must simulate situations with people actually lives when doing their funding choice.

That is why in this paper we examine by means of an artefactual field experiment on a representative sample of Italian adults, how a series of possibly relevant factors impact on the decision to give in a system similar to the 5X1000, where the donor does not incur in any cost when giving. We partially replicate the scheme with a modified Generosity Game asking to 1409 experimental subjects to allocate a monetary prize to one among a list of the most well-known not-for-profit organizations. In order to mimic the tax donation scheme where there is no gain for the taxpayer, in case of no choice, the prize is not earned when the experiment participant expresses no preference. Based on these characteristics, our experiment design allows us to test the effect of three treatment variables measuring three different potential effects: i) the effect of providing information on the aggregate amount of donations received through the 5 per 1,000 channel by the listed organizations in the past year; ii) the effect of eliciting participants' beliefs on the organization rank in terms of donations received in the past year; iii) the effect of the upward bound on aggregate donations which, in case the threshold is hit, reduces to a fraction of what actually given contributions to each organization

[2] Are eligible to receive these donations the not-for-profit and voluntary organizations, universities and other research institutions.

(as it is in the Italian 5 per 1000 mechanism). In addition to it we can also test the hypothesis of indifference between donating and not donating under the assumption of fully self-interested individuals.

We observe some interesting data patterns: our findings reject the hypothesis of fully self-interested behavior and fully impure altruism (implying in our case donors preferences fully independent from the organization's past fund raising performance) and are consistent with both inequity aversion and warm glow preferences depending on the expected marginal benefit of increased donations to the specific charity. More specifically, they document a strong significant effect by which the provision of information on past aggregate donations raises from around 12 to around 32 percent the share of donors to ADMO (the main Italian bone narrow transplant organization which participants find in the bottom place in terms of past year aggregate donations when information is revealed). This effect is consistent with participants' expressed wellbeing preferences which rank health at the top among wellbeing domains. And is highly likely to be affected by the fact that they rank ADMO not last in terms of their beliefs on aggregate donations received in the past, while observing ADMO located far at the bottom (and at high distance from the second last) in the actual ranking. A second related effect is the reduction in the share of individuals who decide not to donate at all. This implies that information provision enhances the already observed departure from fully self-interested behavior. Our results also document several other minor but significant effects in terms of changes in the share of donations among organizations.

Our main conclusion is that the provision of information on past aggregate amounts collected plays a relevant role and that the latter may increase the total amount of donations to not-for-profit organizations if, as in the case of our experiment, participants are led to think that some good cause receives too few donations.

The remainder of our study proceeds as follows. The next section describes the experimental design, the procedures and the sample. Sections 3-5 summarize our descriptive, non-parametric and econometric findings. Section 4 discusses the results and concludes.

2. The Experiment

2.1. Design

Our artefactual field experiment is designed to investigate the effect of information disclosure and beliefs elicitation on charitable giving in a large and representative sample of the population. The baseline experimental task is a modified Generosity Game (Güth, 2010). In its original form, the Generosity Game is played by two players: player A, the 'proposer' and player B, the 'recipient'. Player A chooses the size of the pie that is to be distributed between A and B, knowing that her own share of the pie is fixed and that B is a passive player with no veto power. If we denote with P the size of the pie which is chosen by A ($P \in [P_{lower}, P_{upper}]$) and with x A's exogenously given share of P, (with $0 < x \leq P_{lower} < P_{upper}$), the players' payoffs are $\pi_A = x$ and $\pi_B = P - x$. The most prominent feature of this game is the elimination of the typical trade-off between self-interest and other-regarding concerns that the proposer usually faces in other bargaining games like the dictator and the ultimatum games.

We modify this original form in several ways: first, in our version, all the experimental subjects play the role of the proposer, while the recipient is a real not-for-profit organization. Second, the size of the pie P, is a fixed endowment of 1000 euros for each proposer and the share of the pie (x) going to the proposer is set equal to 0. Third, the proposer faces two sequential decisions: first, she has to decide whether to give or not the pie (the entire endowment) and then, if she decides to give, to which organization to send the money, from a list of nine well-known not-for-profit organizations provided by the experimenters.[3]

In this setting the payoff are $\pi_A = 0$ and $\pi_B = 1000$ or 0, depending on A's choice.

This game is played in a between-subject design, in four different treatments (Table 1). In the first "No Information Treatment" (NIT), subjects play the baseline game with no additional information; in the second "With Information Treatment" (WIT), players are given information about the donations received by each of the nine organizations in the previous fiscal year through the 5X1000 mechanism. In the third "No Information plus Belief Elicitation Treatment" (NIBET) the players have no information but they are asked to rank the organizations according to their beliefs about the amount of donations received in the previous year through the 5X1000 mechanism. In the fourth treatment "No Information plus Belief Elicitation and Threshold Treatment" (NIBETT) the players are given information, are

[3] The organizations are, in alphabetical order: *ADMO* – Bone Marrow Donors Association, *Amnesty International* (Italian Section), *Caritas*, *Emergency*, *Fondazione Banco Alimentare Onlus*, *Greenpeace*, *L.A.V. Lega Antivivisezione*, *UNICEF* (Italian Section) and WWF - World Wildlife Foundation Italy (for a detailed description of the organizations see appendix B).

asked their beliefs and their choices are subject to a threshold. More specifically participants are told that, if the aggregate amount of contributions donated to all the organizations passes a maximum amount, each organization will receive only a percent of the amount actually donated to it.

TABLE 1 ABOUT HERE

The goal of our four treatments is threefold: 1) to investigate the effect on charitable behavior of the knowledge about the total amount of funds raised by each organization in the previous year (WIT vs NIT); 2) to observe the effect on charitable behavior of prior beliefs about the donations received (NIBET vs NIT); 3) to see whether imposing a threshold on the actual distribution of the total donations given by the contributors affects the decision to donate (NIBETT vs NIBET).

2.2. Hypotheses

From our design we can infer a series of testable hypotheses. First, let $S(g)_T$ denote the share of players who give to one of the recipients, and $S(ng)_T$ the share of players who decide not to give in treatment *T (T=WIT, NIT, NIBET, NIBETT)*; similarly let $G_{j(NIT)}$ denote the total amount of donations received by the *j*-th organization in the NIT, with $G_{j(WIT)}$ the amount received in the WIT, $G_{j(NIBET)}$ the amount received in the NIBET, and with $G_{j(NIBETT)}$ the amount received in the NIBETT.

Since for player *A* the material payoff is always equal to zero, she has an incentive to donate only if she cares about the recipients' payoff. Our first hypothesis refers to the indifference between 'giving' and 'not giving' that the proposers should manifest in all the treatments (*T*), assuming self-interest, given that their payoff from 'giving' and from 'not giving' are both equal to zero. The other hypotheses refer to the treatment effects associated to the information disclosure, the beliefs elicitation and the introduction of the threshold. More formally we test:

Hypothesis 1:

H_0: $S(g)_T = S(ng)_T$

H_A: $S(g)_T \neq S(ng)_T$

Hypothesis 2:

H_0: $G_{j(NIT)} = G_{j(WIT)}$

H_A: $G_{j(NIT)} \neq G_{j(WIT)}$

Hypothesis 3:

H_0: $G_{j(NIT)} = G_{j(NIBET)}$

H_A: $G_{j(NIT)} \neq G_{j(NIBET)}$.

Hypothesis 4:

H_0: $G_{j(NIBET)} = G_{j(NIBETT)}$

H_A: $G_{j(NIBET)} \neq G_{j(NIBETT)}$.

2.3. Procedures.

The experiment was conducted in August-September 2013 using a sample of adult subjects stratified by gender, age and education. Subjects responded to a questionnaire carried out in Sardinia, an autonomous region of Italy, using the PAPI (Pen And Paper Interviewing) technique. In addition to a series of questions on socio-demographic characteristics, values, beliefs, and pro-social activities[4], we included a choice task for the modified Generosity Game described in the previous section. The research was fielded by *SmartLab*, a market research firm, and funded by *CSV-Sardegna Solidale*.[5]

Subjects are contacted by the interviewers at home and invited to participate in an opinion survey. They receive a self-explaining anonymous questionnaire that is completed autonomously without any intervention from the interviewer. After answering questions about socio-demographic characteristics, each subject is informed about the rules of the game, the consequences of her choices and the incentive system. Subjects are then presented with the Generosity Game and the understanding of the game is checked by a series of control questions. After completing the choice task, they answer the remaining sections of the survey. Completing the questionnaire takes on average about 20 minutes.

[4] The general questionnaire is in an Appendix available upon request.

[5] See www.smartlabkaralis.it and www.sardegnasolidale.it, respectively, for details.

In the experiment we implemented an incentive system, similar to that used by Fong and Luttmer (2009) and Pelligra and Stanca (2013). We gave to each respondent a lottery ticket. Once all the interviews were completed, one of the tickets was randomly drawn and the choices that the owner of that ticket made in the Generosity Game determined both the recipient (the selected organization) and the actual payments (1000 euros or nothing). The subject, as well as the organization, were then contacted by *SmartLab* and informed about the result of the lottery and, in the case of the organization, paid by bank transfer. We ensured anonymity using a system of unique codes to identify the donors whose identity remained unknown to the experimenters. The different stages of the lottery were filmed and made available to all participants upon request. In the context of our experiment, this procedure was easier to implement than the usual random lottery incentive system (Cubitt *et al.*, 1998), while ensuring, we think, the necessary salience.

The main benefits of using a representative sample of the population (see Table 2), instead of the usual convenience pool of student subjects, are relative to the large number, heterogeneity and representativeness of subjects whose choices are observed. These factors have obvious pros in terms of a finer understanding of the mechanism underlying decision-making, since we have a larger number of socio-demographic determinants to which we can relate variations in behavior, but also in term of external validity and generalizability of the experimental findings. We contacted 2000 subjects and about 75% of them consented to participate in the study and were surveyed using the PAPI technique (Pen And Paper Interviewing). Overall, we obtained 1406 completed questionnaires.

TABLE 2 ABOUT HERE

3. Descriptive findings

Descriptive findings document that our sample is almost perfectly balanced in terms of gender (53 percent females), with average age being 45 (see Table 3). Respondents live in households with 2.2 components on average and around 46 percent of them are married. The preferred wellbeing domain is health (ranked first by 56 percent of respondents with average

rank being 2.47), followed at distance by economic wellbeing (ranked first by 15 percent of respondents with average rank being 4.5).

The organization preferred by donors is Caritas, chosen by around one fourth of the sample. The second is ADMO with 22 percent of total preferences (Table 4). The bottom organization is Greenpeace, selected by just 2 percent of sample donors. Donation choices seem positively correlated with what participants believe the same organizations collected the previous year through the aggregate 5X1000 tax choice. The organization preferred by sample donors, Caritas, is in fact also ranked highest in terms of beliefs (average rank 3.6 in Table 3). An indication which however runs in opposite direction is that of ADMO which is second highest in terms of participant ranking beliefs, while ranked last by far in terms of aggregate donations.

When we compare experimental allocations in the WIT and NIT treatments we find that the most remarkable difference is that of ADMO. The bone narrow transplant organization is selected by 13 percent of donors in the NIT, while by 33 percent of donors in the WIT. This implies a huge between-effect in our experimental treatment, with the provision of information on previous year total donations accounting for an additional 20 percent of respondents choosing ADMO. Note that, according to the information provided in terms of past aggregate donations, experiment participants in the treatment group observe that ADMO receives only around 69,000 euros (0.33 percent of total donations among organizations listed in the experiment) against more than 11 million euros of the top rank organization (Emergency) and more than 1 million euros of WWF and LAV.

Another effect that the provision of information seems to produce is a reduction in the number of participants who decide not to donate at all (the share moves from around 10 to around 4 percent of the sample). Non negligible changes are also those of Unicef and Banco Alimentare (both falling from around 12 to 7 percent from the NIT to the WIT).

Differences in the donation threshold treatment are smaller than those in the information treatment. The comparison between the NIBETT and the NIBET documents that the strongest change concerns Caritas which rises from 21 to 32 percent of donors. Since donors expect Caritas to be the organization receiving more aggregate donations in the past the main interpretation of this finding is that they anticipate that Caritas may receive less than what they expect in case the threshold on aggregate donations is hit (and the proportional cut to all

organizations is affecting more the organization they believe ranked to the top in terms of absolute cut). This induces them to donate to Caritas

4. Hypothesis testing with non-parametric tests.

In the section which follows we comment results from non-parametric tests on the four main effects which can be measured with our experiment design:

i) Indifference between donating and not donating;
ii) the information effect (the WIT as treatment versus the NIT as control);
iii) the belief elicitation effect (the NIBET as treatment versus the NIT as control);
iv) the donation threshold effect (the NIBETT as treatment versus the NIBET as control).

Since our variables of interest on hypotheses ii)-iv) are dichotomous (the decision to donate/not donate to a given organization) we need to test between-subject differences by using the Chi-square test instead of the Mann-Whitney test which is standard for continuous variables. For all of the three effects the test is performed on the overall sample and on gender and age (below/above sample median) split subsamples.

Table 5 presents balancing properties of treatment and control samples in the information, belief elicitation and donation threshold treatments. What we find is that the random allocation of experiment participants produces non-significant differences both in the overall sample and in the gender and age splits. [6]

4.1. Indifference hypothesis

Descriptive evidence on the low share of non-donors documents that we are far from the indifference hypothesis based on the assumption that individuals are fully self-interested. Non donors are 6.97 percent in the overall sample, far below the null of 50 percent. The share of non-donors remains very low also if we look at it in the four different treatments (highest at 9.8 percent in the NIT and lowest at 3.7 percent in the WIT). If we consider the four

[6] Evidence on gender and age splits is omitted for reasons of space and available upon request.

subsamples of individuals participating to the different treatments as four separate observations and perform a t-test under the null of the 50 percent share of non-donors, we obviously find that the null is by no means rejected (T-stat 33.64, p-value 0.000).

4.2. Information effect

Our second experimental hypothesis compares choices between the WIT and the NIT thereby evaluating the impact on donors' choices of the provision of information on the total amount received by organizations in the previous year through the "5X1000" (five per thousand) tax deduction.

Evidence provided in Table 6.1 (column 1) shows that the null of no effect of information is rejected for some organizations. More specifically, the provision of information leads donors to give significantly more to ADMO (χ^2 43.01, p-value 0.000) and significantly less to Banco Alimentare (χ^2 7.46, p-value 0.006), WWF (χ^2 18.85, p-value 0.000) and Unicef (χ^2 5.78, p-value 0.016). Another interesting result is that in the WIT we register a significantly lower share (vis-à-vis the NIT) of participants who decide not to donate at all (3.7 percent against 9.8 percent, χ^2 11.71, p-value 0.001). As already mentioned, the most remarkable effect in terms of magnitude is that of ADMO (with donors jumping from 13 to 33 percent), while the significant changes of shares in the other three organizations are smaller (from 12 percent to 6.7 percent for Banco Alimentare, from 11.6 percent to 6.7 percent for Unicef and from 6.4 percent to 0.7 percent for WWF). This comparison of magnitudes clearly shows that the ADMO effect is dominant since it is larger than (almost coincides with) the sum of the other three significant effects (excluding the change in non-donors).

When we repeat the test in the female subsample (Table 6.2) we find that only information-induced changes in the ADMO (χ^2 22.08, p-value 0.000), Unicef (χ^2 7.46, p-value 0.008) and WWF (χ^2 11.10, p-value 0.001) remain significant (with difference magnitudes which are quite similar to those registered in the overall sample). The changes which remain significant also in the male subsample (Table 6.3) are ADMO (χ^2 21.02, p-value 0.000), WWF (χ^2 7.81, p-value 0.005), Banco Alimentare (χ^2 5.88, p-value 0.015) plus that related to the share of non-donors (χ^2 8.82, p-value 0.003).

When we test the information effect on the above median age subsample (Table 6.4) we find that only ADMO (χ^2 22.50, p-value 0.000) and non-donor shares (χ^2 10.07, p-value 0.002) change significantly while, when we do it in the below median subsample (Table 6.5), the significant effects are those of ADMO (χ^2 19.93, p-value 0.000), Unicef (χ^2 5.90, p-value 0.015), WWF (χ^2 14.39, p-value 0.000) and Banco Alimentare (χ^2 6.56, p-value 0.010).

Overall, our findings seem to suggest that the "ADMO effect" is the main and more robust change induced by information. Experiment participants donate significantly more to the bone narrow transplant organization when information on past donations is available and they see that the organization is ranked by far at the bottom place in terms of total donations received in the previous year (remember also that health resulted to be the most important well-being domain for survey respondents in Table 3). Note as well that all the other effects which are significant in the overall sample are not robust in at least one of the four age and gender subsamples. More specifically, the reduction in the share of participants who decide not to donate at all is significant only in the male and above median age subsample, WWF and Banco Alimentare effects only in the male and below median age subsample, the Unicef effect only in the female and below median age subsample.

4.2.1. Interpretation

The significance of the information effect and the departure from the 50 percent share of non-donors seems to suggest that individuals are altruistic but impurely so, that is, they do not care just about their own giving without regard for external information. In Andreoni (1990) impure altruism concerns regard for the total amount of the public good. In our case we have two observationally equivalent interpretations for it. The first is that individuals may be inequity averse. However we generally expect inequity aversion to have symmetric effects, while in our case the information induced clear cut increase in the share of givers to the lowest rank organization (ADMO) does not correspond to a strong and significant fall in the same share for the higher rank organization. Inequity aversion may however be reconciled with our data if we figure out that individuals suffer from a disutility when observed aggregate donations for a given organization are beyond a symmetric given distance from the mean (and assume that the threshold is passed only at the left of the mean, given the markedly right skewed distribution of aggregate donations that participants observe in our experiment).

A second interpretation consistent with our data is that experiment participants have 'warm glow' preferences depending on the expected marginal benefit of increased donations to the specific charity. This is consistent with the fact that they rank health at the top among well-being domains in the questionnaire (Table 3) and observe that an important organization in this field dealing with bone narrow transplants collects a very tiny share of donations. They may therefore be led to think that the marginal utility of choosing such donation is high, and higher than what they assume when the information is not available (Duncan, 2004; Francois, 2007).

4.3. Belief elicitation effect

The comparison of donors' choices between the NIBET and the NIT measures the belief elicitation effect. More specifically it tests whether the simple request to formulate beliefs about ranking of organizations in terms of aggregate donations received in the previous year produces significant changes in donors' behavior.

When we test the belief elicitation effect in the overall sample we find that it is significant only for *ADMO* (χ^2 7.75, p-value 0.005), Emergency (χ^2 7.60, p-value 0.006) and *Banco Alimentare* (χ^2 7.05, p-value 0.008). More specifically, the effect brings the *ADMO* share from 13 to 21 percent, the *Emergency* share from 11 to 18 percent and the *Banco* share from 12 to 6 percent (Table 6.1).

When we repeat the test in gender and age subsamples we find that the belief elicitation effect produces significant downward changes in donation shares for *LAV* (χ^2 8.03, p-value 0.005) and upward changes for *WWF* (χ^2 15.64, p-value 0.000), *Banco Alimentare* (χ^2 8.52, p-value 0.004) and *ADMO* (χ^2 13.23, p-value 0.000) in the female subsample (Table 6.2), for Banco *Alimentare* (χ^2 8.51, p-value 0.004) and *ADMO* (χ^2 10.34, p-value 0.001) in the male subsample (Table 6.3). Significant effects in the above median age subsample are found for *LAV* (χ^2 7.47, p-value 0.006), *WWF* (χ^2 6.43, p-value 0.011), *Banco Alimentare* (χ^2 5.88, p-value 0.015) and *ADMO* (χ^2 13.77, p-value 0.000) (Table 6.4), while, in the below median age subsample, for *WWF* (χ^2 8.63, p-value 0.003), *Banco Alimentare* (χ^2 12.74, p-value 0.000) and ADMO (χ^2 10.34, p-value 0.001) (Table 6.5).

Overall, the only two effects which are robust also in age and gender subsamples are those of ADMO and Banco Alimentare. They document that belief elicitation increases the ADMO's share of donors, while decreasing that of Banco Alimentare.

In order to understand better these results note that the average expected rank of ADMO among those who decide to donate to ADMO in the NIBET is 3.7, while it is 6 for those who decide not to donate to the same bone narrow transplant organization. Hence, it seems that belief elicitation in the NIBET induces those who effectively decide to donate to ADMO to focus on the relevance for them of this organization (if we assume that such relevance correlates with past expected donations). Our interpretation of the belief elicitation effect may provide hints for enriching and reinforcing our interpretation of the information effect. What we may assume is that, when donors observe that ADMO is ranked at the bottom in the WIT, they may decide to switch to it since the distance between what they think should be the right position of ADMO and the position they observe is too high. Note as well that the distance in expected rank between those who donate and those who do not donate to Banco Alimentare in the NIBET is not too high (4.1 against 5.7). This seems to confirm that the main effect we observe in the experiment relates to ADMO and that the other significant effects are secondary and related to the main one given that the choices are correlated (ie. one more donor to ADMO implies one donor less to the second preferred organization of that donor).

4.4. Threshold effect

The test on the donation threshold hypothesis (NIBETT versus NIBET) documents very few significant changes. The only relevant effect is the increase in Caritas donors in the treatment group. The effect occurs in the overall sample (χ^2 10.56, p-value 0.001) and in the male (χ^2 6.85, p-value 0.009) subsample. In terms of magnitudes the share of donating participants in the overall sample moves from 20.8 to 32.3 percent. As already discussed a plausible rationale is that the risk of proportional cuts to all organizations in case the threshold of aggregate donations is hit leads participants to switch to what they expect to be the organization receiving the largest share of contributions for two reasons: they believe it is the organization deserving more and they anticipate that the absolute value cut for that organization will be highest. In correspondence to the Caritas effect we also observe a reduction in the share of donors for the two organizations (Emergency from 17 to 14 percent

and Unicef from 24 to 10 percent) which collect by far the largest amount of donations in aggregate.

5. Econometric findings

The respect of balancing properties makes econometric estimates redundant for evaluating the significance of treatment effects. However, an econometric analysis in which we control for the impact of concurring factors on donating choices remains interesting for several reasons. First, it makes possible to check the overall effect of ranking beliefs on donating choices in the donating threshold treatment (where both treatment and control group include beliefs). Second, it allows to check whether and how socio-demographic factors affect donating choices. Third, it allows to take into account (if determinants of contributions to each organization are estimated simultaneously) the correlation of residuals in each single equation or, in other terms, the interdependence between the donating/non donating choices given that choosing one organization implies not choosing all the others.

We therefore estimate three times and in three different subsamples (WIT plus NIT for the information effect, NIBET plus NIT for the belief elicitation effect, NIBETT plus NIBET for the threshold effect), a 10-equation multinomial logit system where the j-th individual specification takes the form of

$$G_{ij}=\alpha_{0j} + \alpha_{1j}TREAT +\sum_k \beta_k X_k +\varepsilon_{ij} \quad (3)$$

where *Gij* is the dichotomous (0/1) donating choice of the i-th individual to the j-th organization, *TREAT* is the treatment effect and the X variable vector includes all socio-demographic variables described in Table 3 plus ranking beliefs when we test the threshold effect. More specifically the *TREAT* variable takes respectively the form of: i) a (0/1) dummy taking value one in the WIT when testing the information effect in the WIT plus NIT sample, ii) a (0/1) dummy taking value one in the NIBET group when testing the belief elicitation effect in the NIBET plus NIT sample, iii) a (0/1) dummy taking value one in the NIBETT group when testing the threshold effect in the NIBETT plus NIBET sample.

Our findings confirm the significance of the ADMO effect in the overall sample and in all of the four subsamples (Table 7.1). With regard to the other effects the negative change in non-donors share is significant in four out of five samples (the female subsample being the exception), the effect on the LAV share in three subsamples, while that of Banco Alimentare in two samples (Tables 7.2-7.3). Significant effects in one subsample are also found for Amnesty and Unicef. Overall, our econometric findings seem to confirm that ADMO is the dominant effect given the perfect correspondence in terms of significance with non-parametric tests, while findings do not perfectly match for the other mentioned significant effects. Econometric estimates on the belief effect do not find the same consistence and robustness with non-parametric findings. The Caritas effect disappears and almost no significant effects are found (Table 7.2). The additional qualifying result is that the ranking belief variable is negative and significant in all equations of the donating threshold treatment. This implies that donating choices are positively and significantly correlated with expectations on the rank of the organization in terms of aggregate donations received in the past year. The most likely interpretation is that the ranking expresses the beliefs in the relevance of the organization mission and therefore such belief affects jointly the ranking expectation and the donating choice.

As it often occurs in randomized experiments socio-demographic controls have not much impact on experimental choices. A significant effect we register is the higher propensity to donate of married participants (the married dummy reduces by 1.5 percent the choice of not donating at all). Other significant effects are the negative impact of the manual worker and student dummies on donations to Caritas (1.1 and 1.2 percent the respective magnitudes) and the positive impact of the retired dummy on donations to Emergency (3 percent magnitude). Results are omitted for reasons of space and available upon request.

6. Conclusions.

In times of tightened government budget constraints in high income countries the subsidiary role of not-for-profit organizations in the provision of public goods and services is becoming of paramount importance. The supply of such goods and services crucially depends on the organization's capacity of raising funds directly from the general public. It therefore becomes increasingly relevant to understand better how different funding schemes may work.

In our paper we start from a scheme enforced in Italy which allows taxpayers to allocate a small part of their taxes (5X1000) to a selected not-for-profit organization. The Italian law allows only a single choice option since it is not possible to allocate the amount to more than one organization. We partially replicate the scheme with a modified Generosity Game asking to a representative sample of experiment participants to allocate a monetary prize to one among a list of well-known not-for-profit organizations. In order to mimic the tax donation scheme where there is no gain for the taxpayer in case of no choice, the prize is not earned when the experiment participant expresses no preference. Based on these characteristics, our experiment design allows us to test the effect of three treatments measuring three different potential effects: i) the effect of providing information on the aggregate amount of donations received through the 5X1000 channel by the listed organizations in the past year; ii) the effect of eliciting participants' beliefs on the organization rank in terms of donations received in the past year; iii) the effect of an upward bound on aggregate donations which imposes a proportional cut to contributions to each organization in case the aggregate threshold is passed (as it is in the Italian 5X1000 mechanism). In addition to it we can also test the hypothesis of indifference between donating and not donating under the assumption of fully self-interested individuals.

Our findings reject the hypothesis of fully self-interested behavior and fully impure altruism (the latter implying in our case donors preferences fully independent from the organization's past fund raising performance) and are consistent with both inequity aversion and warm glow preferences depending on the expected marginal benefit of increased donations to the specific charity. More specifically, they document a strong significant effect by which the provision of information on past aggregate donations raises from around 12 to around 32 percent the share of donors to ADMO (the main Italian bone narrow transplant organization that participants find in the bottom place in terms of past year aggregate donations when information is revealed). This effect is consistent with participants' expressed wellbeing preferences which rank health at the top among wellbeing domains. And is highly likely to be affected by the fact that they rank ADMO not last in terms of their beliefs on aggregate donations received in the past, while observing ADMO located far at the bottom (and at high distance from the second last) in the actual ranking. A second related effect is the reduction in the share of individuals who decide not to donate at all. This implies that information enhances the already observed departure from fully self-interested behavior. Our results also document several

other minor but significant effects in terms of changes in the share of donations among organizations.

Our main conclusion is that the provision of information on aggregate donations received in the past plays a relevant role and that the latter may increase the total amount of donations to not-for-profit organizations if, as in the case of our experiment, participants are led to think that some good cause receives too few donations.

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Appendix A: Instructions.

The experimental task

By filling this questionnaire you will take part in a lottery organized by the Department of Economics and Business of the University of Cagliari. Once all the questionnaires are collected (the 31st of October 2013), the winner ticket will be selected. The winner's identity will be kept anonymous to the researchers and she/he will be contacted by the Sardegna Solidale volunteers by means of the numeric code you received.

The first and unique prize is equal to 1,000 euros. However, this money will not go to the winner. She/he can decide whether give it or not to one charitable organization among those from the list below. If the prize is not given the winner will not receive nothing anyway.
Now we ask you to imagine that you have already won the prize: what is your choice? To give or not to give? And to which organization? (Please refer to the list and the options below)
If after the drawn you will result as the lottery winner, the decision you are about to make will be implemented for real. That means that if you decided to give to some organization the prize, such an organization will receive the money for real, otherwise, if you decided not to give, the prize will not be distributed

(only in the 'threshold' treatment)
Note that if the amount of the aggregate donations is greater than a given threshold, only a fraction of the 1,000 euros will be actually distributed to the organization.

(only in the 'beliefs elicitation' treatment)
Before making your choice we ask you to order (by assigning a specific rank) each organization in terms of how much funding you think they received last year through the 5X1000 mechanism (denote with 1 the organization that raised more money and with 9 the one that raised less and with all the other numbers 2-8 those in the intermediate positions)

(in the no-info treatment)

Thick ☑ the corresponding box whether you want to give the 1,000 euros and to which organization:

Thick your preferred option	**Organizations**
☐	NO DONATION
☐	EMERGENCY
☐	UNICEF – ITALIA
☐	L.A.V. _ LEGA ANTIVIVISEZIONE
☐	WWF _ WORLD WIDE FOUNDATION ITALIA
☐	GREENPEACE
☐	AMNESTY INTERNATIONAL - SEZIONE ITALIANA
☐	CARITAS ITALIANA
☐	FONDAZIONE BANCO ALIMENTARE ONLUS
☐	ADMO _ ASSOCIAZIONE DONATORI MIDOLLO OSSEO

(in the info treatment)

Thick ☑ the corresponding box whether you want to give the 1,000 euros and to which organization:

Thick your preferred option	**Organizations**	**Funding** Received in 2011 through 5X1000 (Euros)
☐	NO DONATION	
☐	EMERGENCY	11,023,415.00
☐	UNICEF – ITALIA	5,460,307.00
☐	L.A.V. _ LEGA ANTIVIVISEZIONE	1,176,578.00
☐	WWF _ WORLD WIDE FOUNDATION ITALIA	1,021,070.00
☐	GREENPEACE	758,835.00
☐	AMNESTY INTERNATIONAL - SEZIONE ITALIANA	753,674.00
☐	CARITAS ITALIANA	193,890.00
☐	FONDAZIONE BANCO ALIMENTARE ONLUS	170,351.00
☐	ADMO _ ASSOCIAZIONE DONATORI MIDOLLO OSSEO	68,828.00

(in the no-info+beliefs elicitation treatment)

Thick ☑ the corresponding box whether you want to give the 1,000 euros and to which organization:

Thick your preferred option	**Organizations**	**Ranking** Indicate the position of each organization in term of funding received latest year. (1 = the first… 9 = the last)
☐	NO DONATION	☐
☐	EMERGENCY	☐
☐	UNICEF – ITALIA	☐
☐	L.A.V. _ LEGA ANTIVIVISEZIONE	☐
☐	WWF _ WORLD WIDE FOUNDATION ITALIA	☐
☐	GREENPEACE	☐
☐	AMNESTY INTERNATIONAL - SEZIONE ITALIANA	☐
☐	CARITAS ITALIANA	☐
☐	FONDAZIONE BANCO ALIMENTARE ONLUS	☐
☐	ADMO _ ASSOCIAZIONE DONATORI MIDOLLO OSSEO	☐

Supplementary questionnaire form

Sardegna Solidale and the University of Cagliari are grateful for your decision to participate to this research. We ask you to fill the following questionnaire in all its parts. Try to answer autonomously to all questions and, in case of necessity, ask for the support of our researcher. Answers will be evaluated by us in anonymous form and elaborated in aggregate. Researchers will not be able in any case to retrieve the respondent's identity.

1. Gender

Female

Male

2. Year of birth

3. Marital status

Single

Married

Divorced/Separated

Widowed

4. Education

None

Elementary School

Middle School

High School

Graduate/Post Graduate

5. Place of residence

6. Professional status

Housewife
Salesman
Executive
Unemployed
Clerk
Entrepreneur
Teacher
Self employed
Manual worker
Retired
Student
Other professions

7. What is your living condition?

Living alone
Living with the family
Living with others (non family)

8. Number of household components?

9. Which among the following domains you deem affect more individual wellbeing ? Rank them in ascending order (1 to the most important and 12 to the least important)

Environment
Economic wellbeing
Subjective wellbeing
Education
Employment
Landscape and Cultural Heritage
Politics

Quality of Services

Human Relationships

R%D

Health

Safety

Satisfaction about ec. conditions

Appendix B: The organizations

ADMO's main goal is the information of Italian population on the opportunities that bone marrow transplants may provide to cure leukemias, lymphomas, myelomas and other blood disorders. To highlight the importance of its action the organization claims on its website that in the 1990, the year in which ADMO is born, bone marrow donors were 2,500, while they are 370.000 today (www.admo.it).

Amnesty International is a global movement with more than 3 million supporters, members and activists in more than 150 countries and territories. Its goal is to campaign against grave human rights abuses (www.amnesty.org).

Caritas is an organization created by the Italian Catholic Episcopal Conference to promote charitable activities with the goal of human promotion, social justice and peace. (www.caritasitaliana.it).

Emergency is an independent NGO, founded in Italy in 1994. Its goal is to provide high quality and free of charge health care to the war and poverty victims. The organization has worked since its origin in 15 countries, building hospitals, Surgical Centres, Rehabilitation Centres, Pediatric Clinics, First Aid Posts, Health Care Centres, a Maternity Centre and a Centre for Cardiac Surgery. Subsequent to request from local authorities and other organizations, Emergency has also helped to renovate and equip pre-existing health facilities. (www.emergency.it).

Fondazione Banco Alimentare Onlus is a not-for-profit organization that collects surplus food from restaurants/food service companies to donate it to people in need through others associations and charities (www.bancoalimentare.it).

L.A.V. Lega Antivivisezione, is an organization that fights against any form of speciesism and to protect animal rights (www.lav.it).

Greenpeace Italy is the Italian section of Greenpeace, an independent organization which promotes global campaigns for peace and environmental protection. Greenpeace is present in 40 countries across Europe, the Americas, Asia, Africa and the Pacific (www.greenpeace.org).

AVIS is the most important Italian blood donors' organization. Funded in 1927 it has 3.180 centers at council level, 111 centers at provincial level and 22 centers at regional level. It also has 773 groups in the largest private and public Italian corporations (www.avis.it).

WWF is the world's largest and most experienced independent conservation organization, which addresses issues from the survival of species and habitats to climate change, sustainable business and environmental education (www.wwf.org).

Table 1. Experimental design: treatments and comparisons.

Treatment	**Treatment Variable**	**Comparisons** ***(Effect)***
NIT	No-information	Control Group
WIT	Information	WIT vs NIT (Information effect)
NIBET	No-information + Beliefs Elicitation	NIBET vs NIT (Belief effect)
NIBETT	No-information + Beliefs Elicitation + Threshold	NIBETT vs NIBET (Threshold effect)

Table 2. Sample structure.

	Survey Sample	Survey Population	Italian Population
Age			
15-29	23.56%	15.80%	15.60%
30-44	26.90%	22.60%	22.20%
45-59	23.27%	22.60%	21.30%
60 and above	26.26%	26.70%	27.10%
Education			
Primary	11.10%	25.70%	25.60%
Lower Secondary	52.10%	42.10%	35.40%
Upper Secondary	27.62%	25.30%	28.70%
Degree	7.69%	6,9%	10.30%
Gender			
Male	46.76%	49.00%	48.60%
Female	53.10%	51.00%	51.40%

Source: ISTAT. Notes: columns 2–4 refer to the survey sample, Sardinia (survey population) and Italy, respectively.

Table 3. Descriptive statistics

Variable	Definition	Obs	Mean	Std,	Min	Max
Emergency	*Percent of donors selecting the organization in the tax donation choice*	1406	0.138	0.345	0	1
Unicef		1406	0.105	0.307	0	1
LAV		1406	0.044	0.205	0	1
WWF		1406	0.034	0.182	0	1
Greenpeace		1406	0.022	0.147	0	1
Amnesty		1406	0.041	0.199	0	1
Caritas		1406	0.248	0.432	0	1
Banco		1406	0.076	0.265	0	1
ADMO		1406	0.220	0.415	0	1
Non donors		1406	0.697	0.2547	0	1
Emergency(rank)	*Expected rank in terms of aggregate donations last year*	204	3.863	2.823	1	9
Unicef(rank)		406	3.897	2.517	1	9
Lav(rank)		402	6.423	2.190	1	9
Wwf(rank)		403	5.600	2.163	1	9
Greenpeace(rank)		400	5.608	2.246	1	9
Amnesty(rank)		400	4.895	2.133	1	9
Caritas(rank)		408	3.689	2.496	1	9
Banco(rank)		401	5.394	2.438	1	9
ADMO(rank)		405	5.294	2.768	1	9
	demographics					
Gender	*Female=1*	1406	0.531	0.499	0	1
Age		1405	45.028	17.874	14	93
Ncomp	*Number of household*	1406	2.206	1.576	0	21
	Marital status					
Married		1321	0.466	0.499	0	1
Divorced/Separated		1321	0.071	0.257	0	1
Widowed		1321	0.071	0.257	0	1
Housewife	*Professional Status (Omitted benchmark=craftman)*	1396	0.133	0.339	0	1
Salesman		1396	0.027	0.163	0	1
Executive		1396	0.006	0.080	0	1
Unemployed		1396	0.148	0.356	0	1
Clerk		1396	0.096	0.295	0	1
Entrepreneur		1396	0.014	0.119	0	1
Teacher		1396	0.030	0.171	0	1
Self employed		1396	0.032	0.175	0	1
Manual worker		1396	0.112	0.315	0	1
Retired		1396	0.171	0.377	0	1
Student		1396	0.112	0.315	0	1

Other professions		1396	0.076	0.265	0	1
PrefEnvironment	*Declared rank in wellbeing domain among the 12 listed (ie. The most important domain is ranked first)*	1366	6.422	3.117	1	12
PrefEconomicWellbeing		1384	4.500	3.116	1	12
PrefSubjectiveWellbeing		1372	5.770	3.193	1	12
PrefEducation		1364	6.399	2.852	1	12
PrefEmployment		1378	4.881	3.065	1	12
PrefLandCulturalHeritage		1358	8.784	2.586	1	12
PrefPolitics		1358	9.388	2.894	1	12
PrefQualityOfServices		1364	6.854	2.752	1	12
PrefHumanRelationships		1379	6.245	2.878	1	12
PrefR&D		1353	8.706	2.888	1	12
PrefHealth		1385	2.471	2.543	1	12
PrefSafety		1335	5.990	3.301	1	12
Satisfaction about economic conditions		1392	5.525	2.366	1	10

Table 4 Donating shares in the four groups

	NIT	NIBET	WIT	NIBETT	Last year*
Emergency	0.111	0.179	0.126	0.143	0.534
Unicef	0.116	0.142	0.067	0.102	0.265
LAV	0.059	0.040	0.040	0.034	0.057
WWF	0.064	0.029	0.007	0.038	0.050
Greenpeace	0.028	0.023	0.017	0.019	0.037
Amnesty	0.052	0.035	0.042	0.034	0.037
Caritas	0.214	0.208	0.267	0.323	0.009
Banco	0.124	0.064	0.067	0.038	0.008
ADMO	0.134	0.211	0.331	0.192	0.003
Non givers	0.098	0.069	0.037	0.079	

* Donations received by the organization in the previous year from the 5X1000 tax donation scheme. The information is provided in the WIT. The share of those not donating to any organization is not included in the calculation

Number of observations: 388 observations per treatment.

Table 5 Balancing properties

	Information effect (H_0:NIT=WIT)	**Belief elicitation effect** (H_0:NIBET=WIT)	**Ceiling effect** (H_0:NIBETT=NIBET)
Year of birth	-0.981	1.124	-0.226
	(0.3265)	(0.261)	(0.8209)
Number of household components	-0,085	-1,142	1.351
	(0.9326)	(0.2533)	(0.1768)
Satisfaction with economic conditions	0,0513	0,0032	1.4656
	(0.821)	(0.955)	(0.226)
Female	2.5672	6.1114	0.3554
	(0.141)	(0.013)	(0.551)
Married	2.1672	0.7141	0.0033
	(0.141)	(0.398)	(0.954v
Single	3.9051	0.1763	0.0367
	(0.048)	(0.675)	(0.848)
Divorced/Separated	2.6935	2.1836	1.0327
	(0.101)	(0.139)	(0.31)
Widow	4.1775	2.9927	2.697
	(0.041)	(0.084)	(0.101)
High education	0.2786	0.0014	0.224
	(0.598)	(0.971)	(0.636)
Medium education	1.0446	0.6117	0.7112
	(0.307)	(0.434)	(0.399)
Low education	1.34	0.0138	0.5345
	(0.56)	(0.907)	(0.465)
Housewife	8.3689	0.1733	0.0065
	(0.004)	(0.677)	(0.936)
Salesman	1.0824	0.3674	0.0026
	(0.298)	(0.544)	(0.96)
Executive	0.7557	0.6648	1.4812
	(0.385)	(0.415)	(0.224)
Unemployed	0.2231	0.0605	0.1101
	(0.637)	(0.806)	(0.74)

Clerk	4.2395	9.5477	0.1846
	(0.039)	(0.002)	(0.667)
Entrepreneur	0.0049	1.1164	0.0419
	(0.944)	(0.291)	(0.838)
Teacher	0.4818	1.7264	2.9707
	(0.488)	(0.189)	(0.085)
Self employed	0.6639	0.4439	1.3786
	(0.415)	(0.505)	(0.24)
Manual worker	6.6185	0.0429	0.0275
	(0.01)	(0.836)	(0.868)
Retired	0.8631	0.1918	1.9613
	0.353)	(0.661)	(0.161)
Student	1.4333	0.9906	0.002
	(0.231)	(0.32)	(0.964)
Other professions	0.1585	2.4935	0.0004
	(0.691)	(0.114)	(0.984)

Table 6.1 Non parametric tests - Overall sample

	Information effect (H_0:NIT=WIT)	**Belief elicitation effect** (H_0:NIBET=WIT)	**Ceiling effect** (H_0:NIBETT=NIBET)
Emergency	0.45	7.0482***	1.42
	(0.502)	(0.008)	(0.234)
Unicef	5.78	1.104	2.19
	(0.016)	(0.293)	(0.139)
LAV	1.63	1.334	0.18
	(0.201)	(0.248)	(0.674)
WWF	18.86***	5.050	.367
	(0.000)	(0.025)	(0.544)
Greenpeace	1.08	0.193	0.132
	(0.928)	(0.660)	(0.717)
Amnesty Intl.	0.398	1.231	0.0025
	(0.528)	(0.267)	(0.960)
Caritas	3.09	0.031	10.56***
	(0.079)	(0.861)	(0.001)
Banco Alimentare	7.46**	7.602	2.03
	(0.006)	(0.006)	(0.155)
ADMO	43.01***	7.753**	0.32
	(0.000)	(0.005)	(0.569)
Non givers	11.71***	1.901	0.21
	(0.001)	(0.168)	(0.645)

Variable legend see Table 1. (robust standard errors) ***p<0.01 **p<0.05 *p<0.10

Table 6.2 Non parametric tests - Females

	Information effect (H_0:NIT=WIT)	**Belief elicitation effect** (H_0:NIBET=WIT)	**Ceiling effect** (H_0:NIBETT=NIBET)
Emergency	2.339	15.639***	1.115
	(0.126)	(0.000)	(0.291)
Unicef	7.000***	1.359	3.582
	(0.008)	(0.244)	(0.058) *
LAV	3.982	0.5202	1.708
	(0.046)	(0.471)	(0.191)
WWF	11.105***	2.063	0.1050
	(0.001)	(0.151)	(0.746)
Greenpeace	1.017	8.519	1.793
	(0.313)	(0.004)	(0.181)
Amnesty	0.7356	13.228***	0.2142
	(0.391)	(0.000)	(0.643)
Caritas	2.230	0.5748	3.895**
	(0.135)	(0.448)	(0.048)
Banco Alimentare	2.524	0.0596	1.031
	(0.112)	(0.807)	(0.310)
ADMO	22.077***	13.221***	1.711
	(0.000)	(0.000)	(0.191)
Non givers	3.306*	0.574	0.4465
	(0.069)	(0.448)	(0.504)

Variable legend see Table 1. (robust standard errors) ***p<0.01 **p<0.05 *p<0.10

Table 6.3 Non parametric tests – males

	Information effect (H_0:NIT=WIT)	**Belief elicitation effect** (H_0:NIBET=WIT)	**Ceiling effect** (H_0:NIBETT=NIBET)
Emergency	0.5577	0.0004	0.3797
	(0.455)	(0.984)	(0.538)
Unicef	0.3962	0.4103	0.0110
	(0.529)	(0.522)	(0.916)
LAV	0.2525	2.362	0.2700
	(0.615)	(0.124)	(0.603)
WWF	7.809***	0.0265	0.2700
	(0.005)	(0.871)	(0.603)
Greenpeace	0.1696	0.9476	0.5610
	(0.680)	(0.330)	(0.454)
Amnesty	0.0027	1.383	0.3737
	(0.959)	(0.239)	(0.541)
Caritas	0.9589	8.509	6.849***
	(0.327)	(0.004)	(0.009)
Banco Alimentare	5.879**	10.340***	0.9953
	(0.015)	(0.001)	(0.318)
ADMO	21.029***	8.312***	4.571**
	(0.000)	(0.004)	(0.033)
Non givers	8.818	0.171	0.0016
	(0.003)	(0.179)	(0.968)

Variable legend see Table 1. (robust standard errors) ***p<0.01 **p<0.05 *p<0.10

Table 6.4 Non parametric tests – above median age sample (Age>45)

	Information effect (H_0:NIT=WIT)	**Belief elicitation effect** (H_0:NIBET=WIT)	**Ceiling effect** (H_0:NIBETT=NIBET)
Emergency	0.0509	0.1717	0.9600
	(0.822)	(0.679)	(0.327)
Unicef	0.7196	0.0232	0.1067
	(0.396)	(0.879)	(0.744)
LAV	2.114	7.466***	1.915
	(0.146)	(0.006)	(0.166)
WWF	4.470**	6.433	0.6063
	(0.034)	(0.011)	(0.436)
Greenpeace	1.959	1.853	0.0407
	(0.162)	(0.173)	(0.840)
Amnesty	2.541	3.574*	0.7321
	(0.111)	(0.059)	(0.392)
Caritas	2.324	5.133**	3.649*
	(0.127)	(0.023)	(0.056)
Banco Alimentare	1.914	5.880**	0.2400
	(0.166)	(0.015)	(0.624)
ADMO	22.50***	13.77***	0.7406
	(0.000)	(0.000)	(0.389)
Non givers	10.07***	6.920***	0.5282
	(0.002)	(0.009)	(0.467)

Variable legend see Table 1. (robust standard errors) ***p<0.01 **p<0.05 *p<0.10

Table 6.5 Non parametric tests – below median age sample (Age<45)

	Information effect (H_0:NIT=WIT)	**Belief elicitation effect** (H_0:NIBET=WIT)	**Ceiling effect** (H_0:NIBETT=NIBET)
Emergency	1.420	3.942	1.137
	(0.233)	(0.047)	(0.286)
Unicef	5.902**	1.172	4.997**
	(0.015)	(0.279)	(0.025)
LAV	0.0567	0.0709	0.1859
	(0.812)	(0.790)	(0.666)
WWF	14.39	8.633***	0.1859
	(0.000)	(0.003)	(0.666)
Greenpeace	0.0349	0.0227	0.0694
	(0.852)	(0.880)	(0.792)
Amnesty	0.0250	0.1039	0.0943
	(0.874)	(0.747)	(0.759)
Caritas	1.610	0.5774	9.141***
	(0.204)	(0.447)	(0.002)
Banco Alimentare	6.558**	12.743***	2.001
	(0.010)	(0.000)	(0.157)
ADMO	19.934***	9.869***	0.0511
	(0.000)	(0.002)	(0.821)
Non givers	4.266**	2.128	0.1488
	(0.039)	(0.145)	(0.700)

Variable legend see Table 1. (robust standard errors) ***p<0.01 **p<0.05 *p<0.10

Table 7.1 Robustness check. Synthesis of econometric findings on the information effect

	Emergency	Unicef	LAV	WWF	Greenpeace	Amnesty	Caritas	Banco	ADMO	Non givers
Overall sample	0.268	-0.415	-1.172**	-1.193	-0.740	-0.520	0.183	-0.829**	1.101***	-1.76***
	(0.314)	(0.361)	(0.575)	(0.893)	(0.768)	(0.512)	(0.250)	(0.391)	(0.252)	(0.518)
Female	0.427	-1.276**	-2.491***	-0.159	-0.071	-0.888	0.058	-0.705	1.275***	-1.781
	(0.482)	(0.522)	(0.771)	(1.200)	(1.167)	(1.091)	(0.402)	(0.651)	(0.379)	(1.088)
Male	-0.220	0.165	-4.772	-0.615	-0.589	0.010	0.384	-1.231*	1.120***	-2.569**
	(0.507)	(0.486)	(3.887)	(0.450)	(0.350)	(0.874)	(0.422)	(0.747)	(0.406)	(1.048)
Above median age	0.426	-0.818	-2.774***	-0.506	-0.286	-0.134	-0.196	-0.994	1.288***	-2.399*
	(0.475)	(0.503)	(0.788)	(0.340)	(0.570)	(0.993)	(0.417)	(0.666)	(0.400)	(1.320)
Below median age	0.291	-0.017	-1.422*	-1.026	-0.747	-1.736**	0.640	-1.371	0.832**	-1.942**
	(0.653)	(0.090)	(0.810)	(1.205)	(0.983)	(0.847)	(0.436)	(0.988)	(0.364)	(0.775)

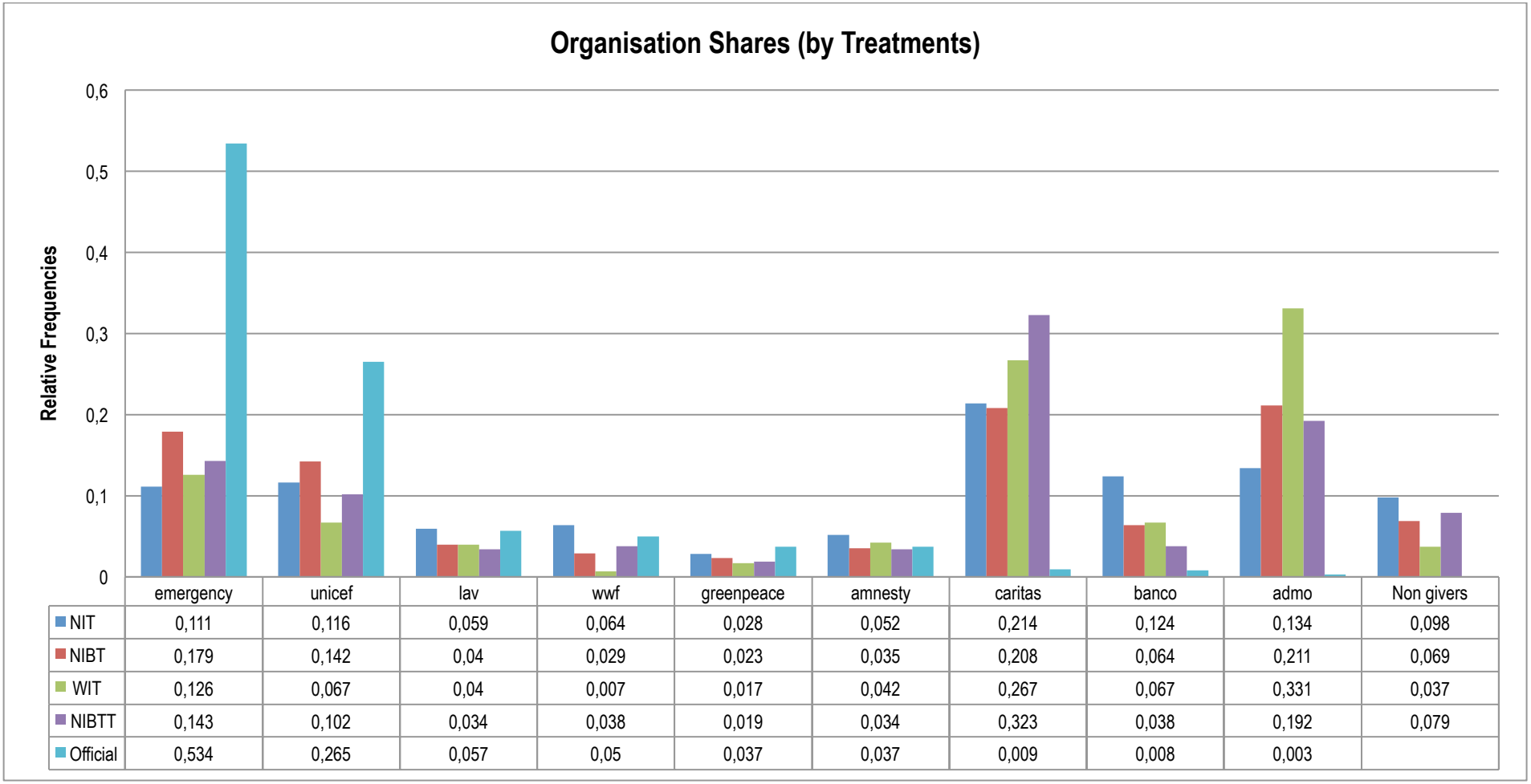
Variable legend see Table 1. (robust standard error) ***p<0.01 **p<0.05 *p<0.10

Table 7.2 Robustness check. Synthesis of econometric findings on the ceiling effect

	Emergency	Unicef	LAV	WWF	Greenpeace	Amnesty	Caritas	Banco	ADMO	Non givers
Overall sample	0.289	-0.842*	-0.743	1.377	-0.072	1.072	0.145	-0.329	0.056	-0.124
	(0.332)	(0.439)	(0.716)	(0.907)	(0.956)	(0.784)	(0.308)	(0.641)	(0.346)	(0.422)
Female	0.166	-1.157*	-0.863	0.219	-1.606	2.411	0.135	-1.246	0.451	0.350
	(0.473)	(0.602)	(0.480)	(0.54)	(0.340)	(2.323)	(0.458)	(2.346)	(0.542)	(1.040)
Male	0.405	-0.123	0.978	0.574	117.457	125.435	-0.004	-0.889	-0.276	-0.780
	(0.540)	(0.152)	(2.973)	(1.369)	(0.000)	(0.000)	(0.472)	(1.200)	(0.510)	(0.749)
Above median age	0.018	0.197	-242.892	722.981	43.987	1.451	0.030	-1.399	0.182	-0.503
	(0.514)	(0.730)	(0.000)	(0.000)	(0.000)	(2.351)	(0.441)	(1.000)	(0.526)	(0.895)
Below median age	0.478	0.143	0.098	1.553	-87.951	3.740	-0.107	0.401	0.583	-0.339
	(0.581)	(0.097)	(1.080)	(1.454)	(0.000)	(3.508)	(0.591)	(0.938)	(0.566)	(0.672)

Variable legend see Table 1. (robust standard error) ***p<0.01 **p<0.05 *p<0.10

Figure 1. Organization shares in NIT, NIBET, WIT, NIBETT and previous year aggregate 5X1000 donations



	emergency	unicef	lav	wwf	greenpeace	amnesty	caritas	banco	admo	Non givers
NIT	0,111	0,116	0,059	0,064	0,028	0,052	0,214	0,124	0,134	0,098
NIBT	0,179	0,142	0,04	0,029	0,023	0,035	0,208	0,064	0,211	0,069
WIT	0,126	0,067	0,04	0,007	0,017	0,042	0,267	0,067	0,331	0,037
NIBTT	0,143	0,102	0,034	0,038	0,019	0,034	0,323	0,038	0,192	0,079
Official	0,534	0,265	0,057	0,05	0,037	0,037	0,009	0,008	0,003	