©*The Pakistan Development Review*
54:1 (Spring 2015) pp. 35–54

The Effects of Informational Framing on Charitable Pledges: Experimental Evidence from a Fund Raising Campaign

ANWAR SHAH, KARIM KHAN, and MUHAMMAD TARIQ MAJEED

We designed a field experiment to test the direction of the impact of informational frame on charitable pledges. We solicited charitable pledges from 395 students during a campaign aimed at helping students through students at the School of Economics, Quaid-i-Azam University (QAU), Islamabad. The participants are randomly divided into 5 different treatments. In the Pledge Disclosed (PD) treatment, we provided information to students about the average size of pledge we received from participants in the Baseline (BL) treatment. Similarly, in the Need Disclosed (ND) treatment, we provided information about the total need of those who asked for assistantship. In the Pledge & Need Disclosed (P&ND) treatment, we informed the students about both the need as well as the pledge made by the students to meet that need. In All Disclosed (AD) treatment, we provided details about the need, pledges, the previous history of the project, and the pledge by Charity Australia International. The findings show that relative to BL treatment, charitable pledges decreased when participants were informed about the previous pledges and the total required need. However, charitable pledge increased when full information was provided to the participants.

JEL Classification: D64
Keywords: Charitable Pledges, Philanthropy, Helping Students through Students, Field Experiment

1. INTRODUCTION

Lack of the financial resources to fund higher education is one of the critical issues of developing countries like Pakistan. Most of the students are financed by their parents for their higher education. However, in recent years, there has been an increasing trend in the contributions from philanthropic organisations. In Pakistan, organisations such as karwan-e-ilm, Alfalah scholarship scheme, and Agha Khan Foundation are working in the field of education to assist students.[1] The main source of the income of these organisations is religious donations such as Zakat and other charitable donations from the public. In order to raise funds, they adopt various methods such as advertisement, fund

Anwar Shah <anwar@qau.edu.pk> is Assistant Professor, Department of Economics, Quaid-i-Azam University, Islamabad. Karim Khan <karim.khan@pide.org.pk> is Assistant Professor, Pakistan Institute of Development Economics, Islamabad. Muhammad Tariq Majeed <tariq@qau.edu.pk> is Assistant Professor, Department of Economics, Quaid-i-Azam University, Islamabad.

Authors' Note: The authors are thankful to the editor of *PDR* and the two anonymous referees for their useful comments.

[1] http://www.kif.com.pk/, http://www.alfalahss.org/, http://www.akdn.org/akf_scholarships.asp

raising dinners etc. Likewise, they adopt different strategies to assist students such as direct scholarships, purchasing books, or providing uniform etc.

Researchers have analysed the effects of various factors on fund raising. For instance, List and Lucking-Reiley (2002) analysed the impact of seed money and refund on fund raising. The impact of government grants on private donations in the form of crowding in and crowding out has also attracted the attention of scholars (Andreoni and Payne 2011). In crowding out, individual donors consider their voluntary private contributions as a substitute for their involuntary contributions through taxation. Hence, they reduce full amount to a charity. In contrast, in crowding-in individual donors regard their contributions complementary to the contributions of government. Mostly, the concepts of crowding-in and crowding-out have been analysed by the researchers for the cases where both the government and public are contributors to philanthropy. To our knowledge, there is no commendable work on the impact of informational framing on private philanthropic pledges. We fill this gap with an experimental study where we test whether the type of information provided to participants affect the size of pledges or not. These experiments have been carried out in a fund raising campaign for helping students through students in School of Economics QAU, Islamabad.

Like the international literature, philanthropy in Pakistan has been the focus of attention of the researchers [Agha Khan Development Network (AKDN) (2000); Ghaus-Pasha, *et al.* (2002)]. However, none of them addresses the hypotheses raised in this paper. For instance, Agha Khan Development Network (2000) provides a report on the indigenous sources of philanthropy. Ghaus-Pasha, *et al.* (2002) documents the key dimensions such as size, structure, revenue, and the composition of the non-profit sector in Pakistan. Similarly, Abbasi (2011) analyses the success of the non-profit sector of Pakistan in terms of funds generated indigenously. In particular, the study focuses on sectors where the activities of non-profit sector have contributed in terms of infrastructure development and the ripple effect. Additionally, the article explores the philanthropic depth of the society by examining the ability to handle natural or manmade catastrophes over the decades. Unlike the previous studies, here we want to see the impact of information disclosure on philanthropic pledges.

Our study is based on a fund raising campaign which comprises two rounds. In the first round, we went to class rooms in the School of Economics, Quaid-i-Azam University, Islamabad. We read out all the written instructions loudly and invited applications from the needy students for assisting them in the spring semester of 2014. At the end of this round, we received 11 applications from students who were seeking assistantship. In the second round we divided all the students, approached in the first round, into five treatments. Our aim was to take pledges in the form of donations from students for helping those needy students who submitted applications in the first round. Again in the second round, we read out all the written instructions to students in all of the 5 treatments.

In the baseline (BL) treatment, the students were asked to give written pledges on a given form. They could choose an option from the list or could choose any other amount. In the Pledge Disclosed (PD) treatment, the students were provided information about the amount of pledge per student in the BL treatment and they were asked to give pledges on the same written form. The same exercise was repeated in the third treatment

i.e. Need-Disclosed (ND) treatment, where the students were provided with the information about the total need asked by the deserving students in the first round. In the fourth treatment which is called Pledge and Need-Disclosed (P&ND) treatment, the students were asked to make pledges after being informed about the need as well as the amount of pledge per student in all of the previous treatments. In the final treatment, All-Disclosed (AD) treatment, the students were provided all the information about the previous developments. For instance, they were briefed about the history of the campaign, pledges by the students in the previous treatments, the total need, and the financial support from an Australian based charitable organisation.[2]

The findings show both the effects of crowding-out and crowding-in. For instance, crowding-out is observed in the PD treatment while crowding-in is observed in the P&ND and AD treatments. In the ND treatment, the information regarding the need for donations decreases the average rate of pledge relative to the BL treatment. The rest of the paper is organised in five sections. Section 2 reviews some of literature on the hypotheses of crowding-in and crowding-out. Experimental procedure and the description of treatments are provided in Section 3. Section 4 describes the theoretical framework and discusses the main hypotheses of the study. Results are presented in Section 5 while the study is concluded in Section 6.

2. REVIEW OF LITERATURE

To our knowledge, there is no commendable work in the available literature that could explain the effects of information regarding previous pledges on private pledges to charitable organisations. However, there is considerable literature that examines the displacement of donations to the private charitable organisations due to the grant from government. For example, Steinberg (1991), after reviewing 13 studies on the issue of crowding out, finds that a dollar of government spending crowds out private donations by $0.005 to $0.35. In the same way, Payne (1998) finds that the effect is $0.50 for shelter, human services and similar organisations. Onwards, Ribar and Wilhelm (2002) find that the government funding to the international relief organisations crowds out private donations by 23 precent. In contrast, Straub (2003) finds no crowding out for public radio matching grants.

In order to find the causes of crowding-out Andreoni and Payne (2011) proclaim that governemnt grants reduce fund raising activities, and therby reduce the amount raised from private donations. Alternatively, the reduction of fund raising activities dominates the reduction in the rate of donations in the crowding-out effect caused by the government grants.[3] Besides crowding-out, there is also empirical evidence that supports the possibility of crowding-in. For instance, Khanna, *et al.* (1995) finds crowding-in of 9.4 percent in a study of the non-profit organisations in the United Kingdom (UK). Likewise, Khanna and Sandler (2000) find some evidence of crowding-in for government grants in the health and social welfare sectors. In contrast, Payne (2001) reports the evidence that the federal research grants in the United States cause both crowding-in and

[2]Charity Australia International was the organisation which had offered the financial support before the experiments.

[3]Using a panel of more than 8,000 charities, the study finds significant crowding out but primarily due to reduced fund-raising.

crowding-out of private donations to universities. For instance, the study shows that the federal research funding increases private donations by 65 percent to 100 percent for research universities while similar research funding to liberal arts colleges and non-research universities decreases private donations by 45 percent and 9 percent respectively.

The above literature suggests that people's response to government grant depends on their motive for giving, their information about the nature of the organisations, and their knowledge about the sources of funding. Regarding these issues, Andreoni (1993) provides an important source of information to distinguish between the alternative hypotheses regarding the pattern of contributions. In the study, the crowding-out hypothesis is tested within the framework of a public good game. The game consists of three players and has an interior Nash equilibrium, which is below the level of contributions characterised as Pareto efficient. In one treatment (no-tax), there is no minimum level of contribution. The other treatment (tax) sets a minimum level of investment in the public good. This minimum level is set lower than the equilibrium level of contribution. The treatment is not framed as a tax, but rather the payoff matrix is set up so that there is a two-token minimum. The complete crowding out hypothesis predicts that the total contributions to the public good in both the no-tax and tax treatments (including the two-token tax) would be the same. However, the results show a high level of crowding-out in the tax treatment. For instance, contributions in the no tax treatment are 71.5 percent higher than the contribution in the tax treatment across all the rounds.

In a similar study, Eckel, *et al.* (2005) examines through a controlled experiment whether the third-party contributions crowd-out private giving to a charity. A single dictator game is played by the participants where they choose their preferred rate of charity from a given list. The experiment has four treatments: two initial allocations and two frames. Initial allocations are either $18 for the subject and $2 for the charity or $15 for the subject and $5 for the charity. The participants could then allocate additional funds if they wished so. In the first frame, subjects are simply informed of the initial allocations among themselves and their chosen charity. In the second frame, subjects are told that their allocation of $20 has been taxed, and the tax collected has been given to the charity of their choice. The structure of payoffs is the same in both of the frames. The results show that no participant contributes additional amount in the tax-frame, showing nearly 100 percent crowding-out. In contrast, in the first frame, almost all of the participants contribute some additional amount, showing a close to zero crowding-out.

In most of the above studies, we can observe that the crowding-out is mostly associated with the grants from the government. However, this is quite possible that the information about individuals' grants to charity displace the donations of the private donors. This question is partly analysed by Nikiforakis (2010) in a different context in the creation of a public good game. Nikiforakis (2010) provides feedback to participants in a public good game regarding the earnings and contribution of their peers. The paper shows that the level of cooperation is significantly low in the treatment where subjects receive information about the earnings of their peers as compared to the treatment where subjects receive information about the contributions of their peers. This is in-spite of the fact the feedback format does not affect incentives. Besides Nikiforakis (2010), there is no study that systemically answers this question in the context of charitable pledges. We fill this

gap by showing the effects of information revelation on philanthropic pledges in a field experiment. Moreover, in the informational frame of the earlier researchers, the donation is not passed on to the needy among the same subject pool. While, we study the impact of informational frame on charitable pledges where participants clearly know that their donations will be actually passed on to the needy among the same subject pool.

3. EXPERIMENTAL PROCEDURE AND TREATMENTS

The experiment for our analysis was conducted in the School of Economics, Quaid-i-Azam University (QAU), Islamabad during the months of November and December 2013. In the school, more than 600 students are registered in four programs, i.e. BS, MSc, MPhil, and PhD. The experiment comprised two rounds. In the first round, applications were sought from the needy students for financial assistantship. During the teaching hours, after getting approval from the concerned teachers, we visited class rooms and provided the details of the project by reading out the written instructions.[4] The students were asked to submit their applications for financial assistantship within a week at the main office of the School of Economics. In the application they were required to provide a brief introduction and background of their financial need. Students were also informed that a committee comprising of the teachers of the same school will conduct interviews of the applicants and only those will be helped, who are recommended by the committee. After visiting most of the classes, the same written instructions were displayed on all the notice boards of the school. The purpose was to ensure that the information reaches all the students who might have been absent during our visit to their classes.[5] Within the due time, we received 11 applications. One may wonder about the small number of applicants. However, the students knew that cheating their own teachers might not be possible; hence only those applied who were really suffering financially. It is worth mentioning that almost all of the applicants were recommended by the committee after interviews. In the applications, the total demanded amount was 342,000 Pakistani rupees (approximately $3420) for one semester.

In the second round we visited the same classes after a week. The main purpose of the second round was to collect pledges from students in order to support those students who had asked for help in the first round. A question might arise here that donors and recipients belong to the same subjects. This was done to make the students realise that the needy were from them; however, the identity of the needy students was not provided. After reading out the written instructions, we provided the pledge forms to the students. The pledge form contained various options. Each student was asked to select an option of his choice and drop it in a large collection box that we had placed in the room. The reason of placing a large collection box was to minimise the experimenter demand effect if any. It is worth mentioning that the size of classes was heterogeneous, hence students could pledge zero without peer pressure. It is also worth mentioning that the students only knew that the pledges are taken to help the needy among them; however, they did not know that they are participating in an experiment as well. In this round, all the students were divided into five treatments. The details of the all 5 treatments are

[4]All instructions are available in the Appendix.

[5]It is pertinent to mention that there are about 4 Notice boards in the school and the instructions were displayed on all of them.

summarised in Table 1. Each of the treatments differed from the baseline treatment only in terms of the provision of additional information.

In the baseline (BL) treatment we distributed the pledge forms after reading out the written instructions. The students deposited the pledge form in the collection box. In the second treatment named as Pledge Disclosed (PD) treatment, the students were provided additional information about the *average amount of pledge per students in the BL treatment* before submitting their pledges. The additional information in the third treatment, *i.e.* Need Disclosed (ND) treatment, was about the *total need of the students* who had asked for financial help in the first round. In the fourth treatment, *i.e.* Pledge and Need Disclosed (P&ND) treatment, students were asked to make pledges after providing them with the information about *the need as well as the average amount of pledges per students* in all of the previous three treatments. The fifth and final treatment named as All Disclosed (AD) treatment was similar to the fourth treatment except that the students were provided with an additional set of information. The additional information was about a pledge of 200,000 Pakistani rupees ($2000) by the Charity Australia International which is an Australian based charitable organisation.

Table 1

The List of Experimental Treatments

Treatment	Informational Frame	No. of Observations
Baseline (BL)	No prior information about pledges or needs	112
Pledge Disclosed (PD)	Prior information about the average pledge in BL	75
Need Disclosed (ND)	Prior information about the total demand for financial assistance	75
Need and Pledge Disclosed (P&ND)	Prior information about total demand and the average pledge calculated from BL, PD and ND treatments	78
All Disclosed (AD)	Prior information about the history, pledge calculated from all previous treatments, total demand and pledge by Charity Australia International	55

4. THEORETICAL FRAMEWORK AND HYPOTHESES

Based on the assumption that economic agents are selfish, there are at least five distinct theories that explain why one contributes to philanthropic causes. Most of them predict that individual benefits, at least partially, from the philanthropic contribution. The dynastic model of family given by Barro (1974) asserts that individuals appear to act altruistically by passing wealth to their children; however, this philanthropic act is in reality a lateral shift within the family. Thus, it assumes that family rather than the individual is the main unit of analysis. Andreoni (1989) argues that an individual receives a private good of "warm glow" from an act of philanthropy along with more of a public good towards which he/she makes donation. Clotfelter and Steuerle (1981) illustrate that income taxes have a negative effect on the amount individuals contribute to philanthropy. This implies that tax deductibility partially counteracts the discouragement caused by the imposition of that tax. In other words, individuals are willing to make donations only if the price of giving is low enough. Asheim (1991) asserts that individuals consume private goods in conjunction with altruistic giving such that they will only choose a level of

private consumption that is "just". Alternatively, the chosen level must take into consideration the necessity of altruism. Rose-Ackerman (1996) has made an argument similar to Andreoni (1989) in the separation of public and private goods, theorising that individuals give altruistically in order to receive, as a private good, greater social capital in return.

In the design of our experiment, students create public good privately; hence the theories of Andreoni (1989) and Rose-Ackerman (1996) fit more to our design.[6] As mentioned earlier, these studies assert that individuals' donations are like a public good; however, individual donors receive private goods of "warm glow" from their actions. Those who pledge donation in the design of our experiment are not direct beneficiaries; but they are likely to receive "warm glow". Hence, the theories of Andreoni (1989) and Rose-Ackerman (1996) apply to the design of our experiment and we expected positive amount of pledges in all of the five treatments. In addition, the involvement of teachers is also an important factor for the positive amount of pledges as Rose-Ackerman (1986) noted that when a third party (especially the department teacher) acts as a monitor; it improves the information available to donors, making the donors to contribute more.

Next, we discuss the question that how the informational frame affects the level of pledges in different treatments. For instance, the informational frame in the ND treatment is such that we informed the students about the level of the need; however, we did not inform them about the pledges made until that time to meet the required need. The total need was about 342,000 Pakistani rupees (About $3420) based on the applications of 11 needy students that we received in the first round. Hence, considering the total demand, each student in the ND treatment might underscore his pledge and instead of pledging high may pledge low. The studies, based on survey, reveal that when people perceive that their contribution will not make any difference, they are less likely to contribute [Radley and Kennedy (1992); Mathur (1996); Diamond and Gooding Williams (2002); Duncan (2004); Arumi, *et al.* (2005); Smith and McSweeney (2007)]. The individuals, who perceive so, believe in the reasoning of free rider problem [Olson (1965)]. In other words, they think that an additional dollar does not solve the problem; hence, not giving does not make things worse.

In the PD and P&ND treatments we expect crowding-in. The possible justification is that when students see that others give to a charity; they can take this as a signal that others have confidence in the organisers or organisation.[7] In particular, in P&ND treatment, the students can also observe the need; hence, they are more likely to pledge more. This leadership effect is described earlier by social psychologists as a 'modelling effect' [Bryan and Test (1967); Lincoln (1977); Reingen (1982)]. One can argue that the high level of pledges in the ND treatment might force participants to think that their pledges are no longer needed. This is a valid argument, but is less likely in our case, as participants in the PD treatment could not observe whether the need has been satisfied. And participants of P&ND treatments could clearly observe that the pledged amount is less than the need.

[6] The creation of a pool from where needy students can benefit is like a public good. The production of this public good comes through voluntary contribution. As this public good is run by private organisation (Roshni Trust), hence, we are of the view that students create a public good privately.

[7] In this case, the organisation is Roshni Trust which, as stated earlier, sponsors tuition fees of students in Quaid-i-Azam University, Islamabad.

In the AD treatment, the students are also likely to show crowding-in. The major reason is that a matching offer by a third party "Charity Australia International (CAI)" can have a legitimising effect. Students are likely to think that the third party had enough confidence in the organisation. This may increase the confidence level of the students in the organisation and as a result, they might pledge more. In a field experiment of a health charity, Van der Scheer, *et al.* (1998) found that a signature by a professor in health care research raised donations by 2.4 percent. Similarly, a lab experiment found that observing high status donators leads others to increase their donations. In contrast, the leadership effect was not found when low status individuals were observed as contributors [Kumru and Vesterlund (2002)]. The giving by CAI may also increase the perceived value of giving for students. This is because the students might see themselves in line with the cause endorsed by a party having superior information [Vesterlund (2003)].

Based on the above discussions, we test the following hypotheses in this study:

Hypothesis 1

The pledges per students in the Pledge Disclosed (PD) treatment will be higher while the pledges per students in the Need Disclosed (ND) treatment will be lower than the pledges per students in the BL treatment.

Hypothesis 2

The pledges per students in the Pledge and Need Disclosed (P&ND) as well as in the All Disclosed treatments (AD) will be higher than the pledges per students in the BL treatment.

5. RESULTS

In this section, we present the results of our analysis. First, we will provide an overview of the average pledges in all the treatments. Next, we will discuss the impact of informational frame on the total pledges in each treatment relative to the baseline treatment.

5.1. Descriptive Statistics

The descriptive statistics of the charitable pledges across all the treatments are shown in Table 1. Besides pledges, it also provides the information regarding the number of observations per treatment and the average expenditure of students per semester.[8] The second row in the Table shows the percentage of students in each treatment who have made a positive pledge. As is evident from the Table, this percentage is higher in All Disclosed (AD) treatment. Moreover, the results show that the level of pledges does not increase monotonically as we move from BL to AD treatment. The average pledge in the Baseline (BL) treatment is 434.46 ($4.34) Pakistan rupees. As we provide information on pledge requests, there are different effects with different degrees of information provided. For instance, as the Table shows, the average pledge size decreases in PD and ND treatments while it increases in P&ND and AD treatments.

[8]Semester in Quaid-i-Azam University generally consists of five months and there are two semesters per year, i.e. fall and spring.

Table 2

Descriptive Statistics of Charitable Pledges across Treatments in PKR (Where Approximately 100 PKR=$1)

	Baseline (BL)	Pledge Disclosed (PD)	Need Disclosed (ND)	Pledge and Need Disclosed P&ND)	All Disclosed (AD)
Total number of observations	112	75	75	78	55
% of observations with positive pledges	51.78	61.33	56.00	55.13	74.54
The maximum amount of positive pledges	2688	1344	2688	2688	6000
The minimum amount of positive pledges	100	50	50	100	10
Average pledges per semester	434.46	325.07	341.41	522.67	644.62
Average expenditure per semester	32358.6	35167	28773	27063.5	32471.7
Average pledges as a % of average expenditure	1.34	0.92	1.19	1.93	1.98

The results are further elaborated in Figures 1 and 2 where the average pledges across BL, PD, and ND treatments are shown in figure 1 while the average pledges across BL, P&ND, and AD treatments are shown in Figure 2. It can be observed that the average pledges show a downward trend in cases of PD and ND treatments relative to the BL treatment. In contrast, the average pledges in P&ND and AD treatments show an increasing trend relative to the BL treatment. In order to find the justification for these results, we provide the detailed description of each treatment relative to the BL treatment.

Fig. 1. Comparison of Average Pledges across BL, PD and ND Treatments

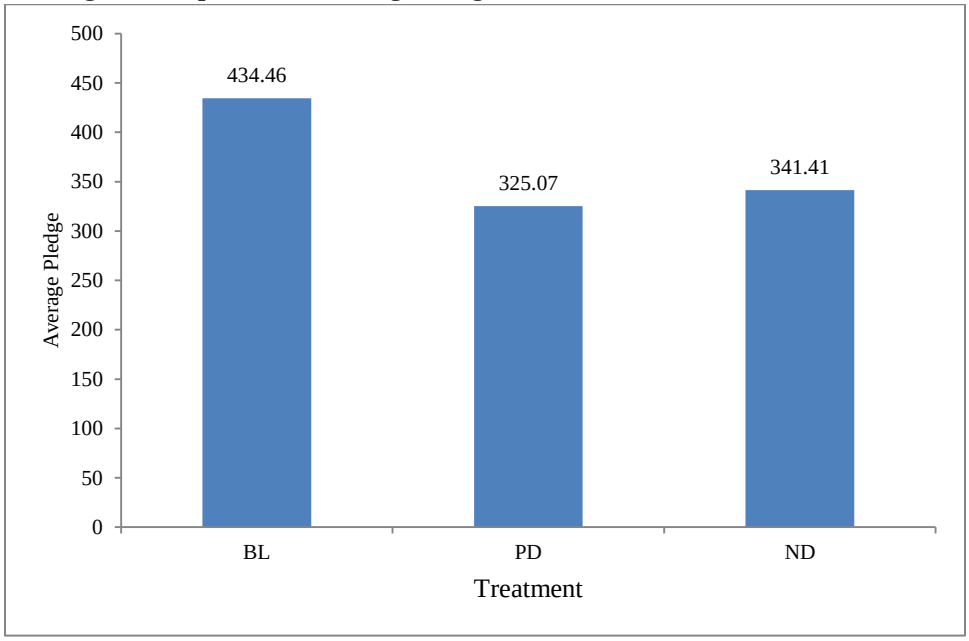
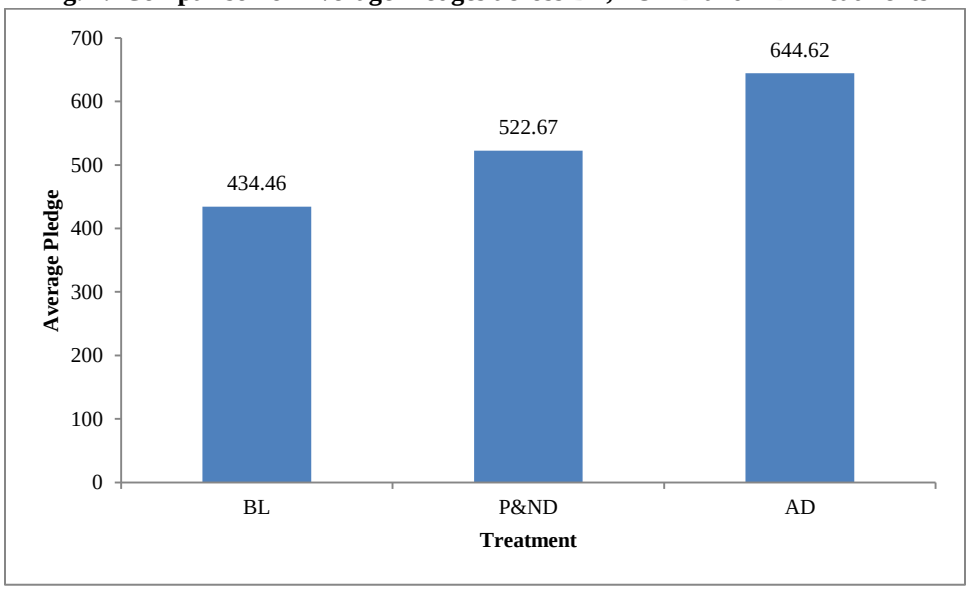


Fig. 2. Comparison of Average Pledges across BL, P&ND and AD Treatments



5.2. Baseline and Pledge Disclosed Treatments

As stated earlier, in the PD treatment, we disclosed the information about the average pledge by the participants in the BL treatment. With the introduction of such a piece of information, the participation ratio increased. For instance, we find that the percentage of participants with positive pledge rises from 51.78 percent in the BL treatment to 61.33 percent in the PD treatment. However, the average pledge decreases in the PD treatment to 325.07 Pakistan rupees which is 434.46 rupees in the BL treatment. Likewise, the maximum pledge in the BL treatment is 2688 rupees which decreases to 1344 rupee in the PD treatment. Similar to the maximum pledge, the minimum level of pledge also decreases from 100 rupees in the BL treatment to 50 rupees in the PD treatment. Taking positive pledge of each participants as an independent observation, Wilcoxon Rank-sum test shows that the distribution of pledges is not similar across both treatments ($p<0.01$).

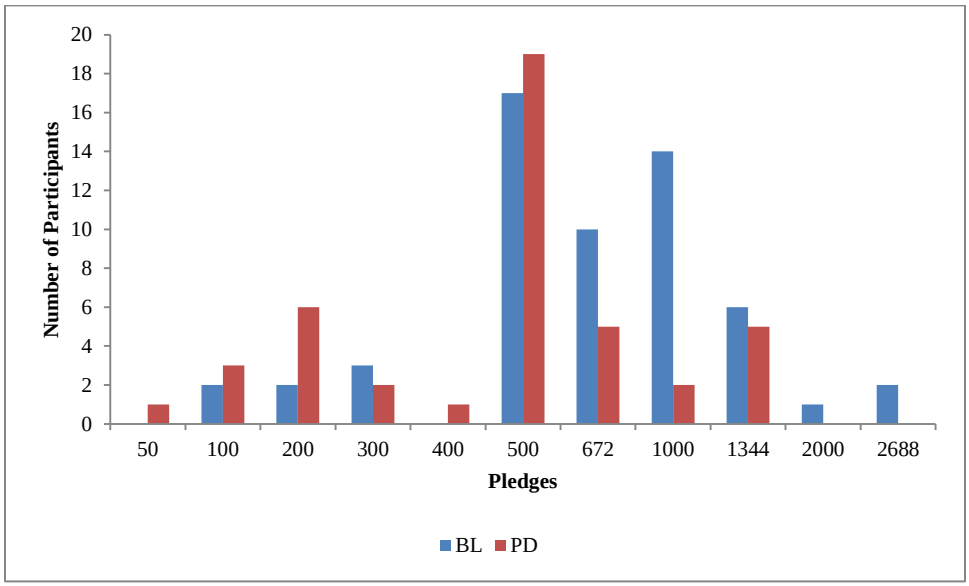
The fall in the average size of pledge in the PD treatment is against the hypothesis 1. It is astonishing for us as one might have expected an increase in the size of pledge. However, it is possible that the participants in PD treatment might have thought that as others have already made a reasonable amount of pledge, so why not to free ride on their pledges. Second, the other justification for the fall in the average level of pledge in the PD treatment might be the lack of information with regard to the need for donations. In other words, we did not provide information regarding the total need for donations with the pledge request in the PD treatment.[9] Hence, they might have thought that the pledge made in the BL treatment might satisfy the total need. Third, it is also pertinent to mention that we provided information about the amount of average pledge in the BL

[9]The total need for donations was collected in the first round of the experiment through applications from the applicants.

treatment but did not provide the total number of participants that pledged that amount. In order to justify free riding on the pledges of others, the students in the PD treatment might have overestimated the total number of participants in the BL treatment. Finally, the difference in the sample of students in terms of their incomes across both the treatments might explain the difference in their average level of pledges. This conjecture, however, loses ground when we compare the average expenditure of students across both the treatments.[10] As is evident from Table 2, the average expenditure of students per semester in the BL treatment is 32358.6 Pakistani rupees while in the PD treatment, it is 35167 rupees.

A comparison of the distributions of pledges across BL and PD treatments is shown in Figure 3. As the figure indicates, the number of larger pledges decreases. For instance, the frequency of pledges below 500 rupees is high in the PD treatment as compared with those in the BL treatment. In contrast, the number of larger pledges, in particular over 500 rupees, is more in the BL treatment.

Fig. 3. Distribution of Pledges across BL and PD Treatments



5.3. Baseline and Need Disclosed Treatment

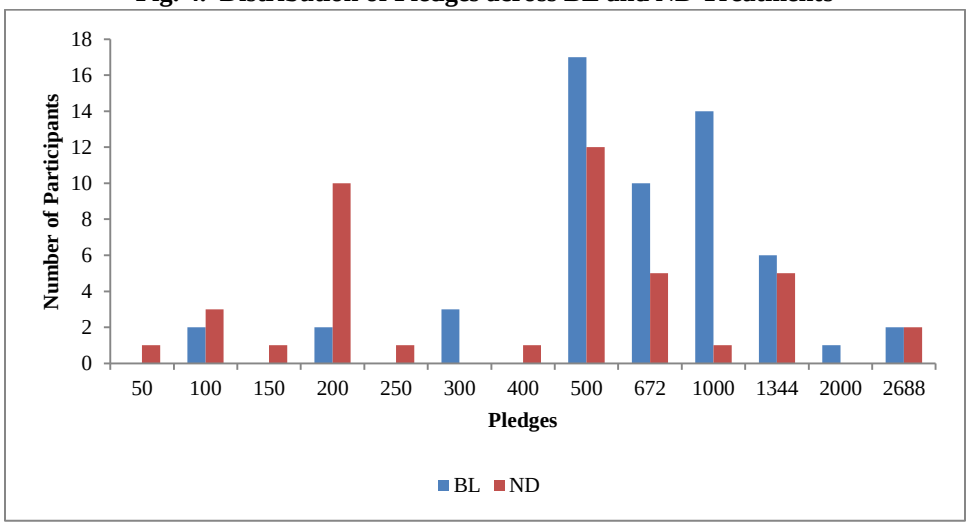
The rate of Participation in the ND treatment increases to 56 percent from 51.78 percent in the BL treatment. However, the inclusion of additional information in the PD treatment does not seem to have a beneficial effect on the pledge size as is shown in Figure 4.[11] The Figure indicates that the distribution of the pledge size in the ND treatment is mostly lower than the distribution of the pledge size for the corresponding

[10]The average expenditure per semester can be regarded as a proxy of income as the spending pattern or the spending level is a strong indicator of the level of income.

[11]The additional information was the disclosure of the need of deserving students from round 1 of the experiment.

BL treatment. The number of pledges lower than 500 rupees is more in the ND treatment while the number of pledges greater than 500 rupees is less in the ND treatment. As a consequence, the average pledge in the ND treatment drops to 341.41 rupees from 434.46 rupees in the BL treatment. This translates into a negative effect of the additional information in the form of disclosing the need of deserving students on the average pledge size. For instance, it decreases the average pledge size by 93.05 rupees. If we take positive value of individual pledges as independent observations, the Wilcoxon Rank-Sum test shows that the distribution of pledges in ND treatment is higher than the distribution of pledges in the BL treatment ($p<0.01$). The finding supports hypothesis 2 and substantiates the evidence of earlier studies. For instance, the earlier research establishes that when people perceive that their contribution will not make any difference, they are less likely to contribute [Radley and Kennedy (1992); Mathur (1996); Diamond and Gooding Williams (2002); Duncan (2004); Arumi, *et al.* (2005); Smith and McSweeney (2007)].

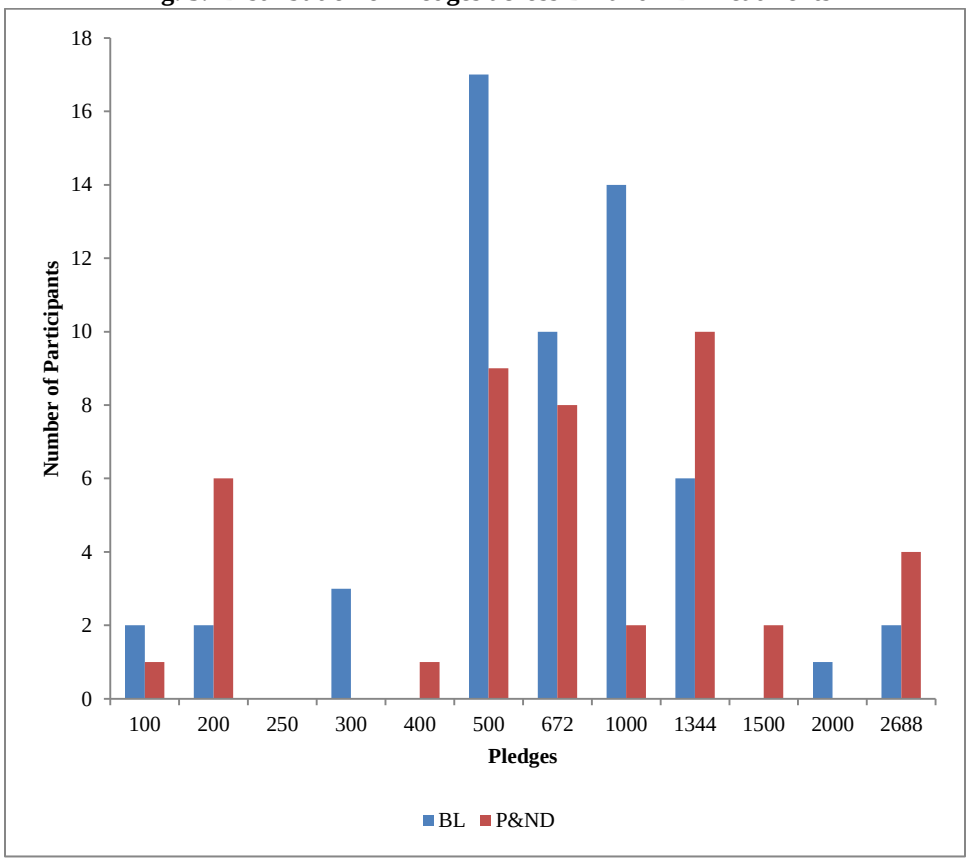
Fig. 4. Distribution of Pledges across BL and ND Treatments



5.4. Baseline and Pledge and Need Disclosed Treatment

In this treatment, we disclose both the earlier pledge and the total need to the participants. With the introduction of this information, the number of individuals who make positive pledges increases. In addition to the increase in the number of pledge makers, the sizes of the pledges also increase. The average pledge amount is 522.67 Pakistani rupees in the P&ND treatment which is larger than that of the BL treatment by 88.20 rupees. The comparison of the distributions of pledges in the P&ND and BL treatments is shown in Figure 5. It is evident from the Figure that the level of pledge in the P&ND treatment is mostly skewed to the upper tail of the distribution. Also, the level of the highest donation, i.e. 2688 rupees, almost doubles in the P&ND treatment. However, taking positive level of the individual pledges as independent observations, Wilcoxon Rank-Sum test does not show that the distribution of pledges across the two treatments is much different ($p=0.58$).

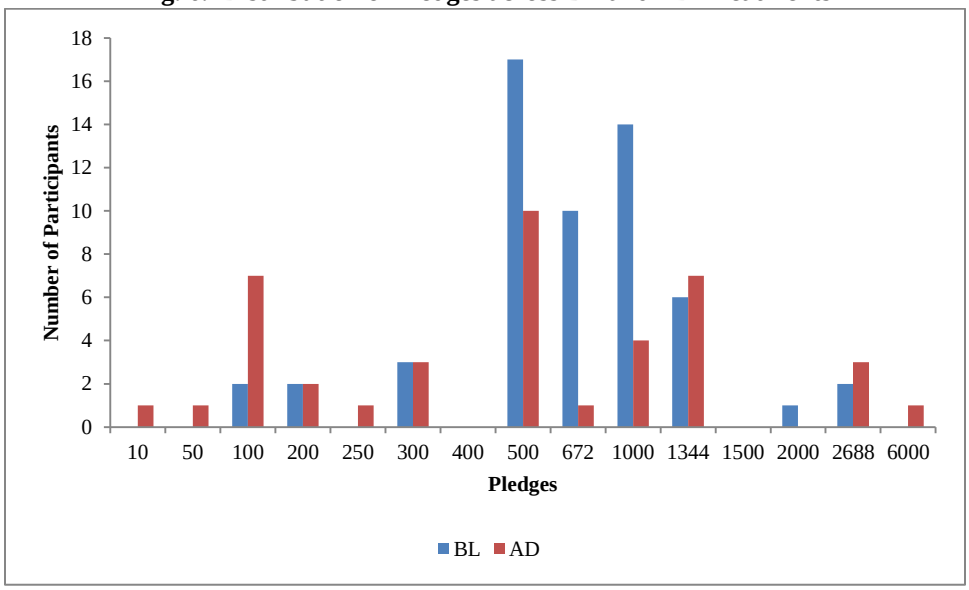
Fig. 5. Distribution of Pledges across BL and PD Treatments



5.5. Baseline and All Disclosed Treatment

In this treatment, all of the previous information was disclosed with the pledge requests. The results are remarkable both in terms of the participation rate and in terms of the size of pledges. Namely, both the participation rate and the size of the pledges increase in the AD treatment. The participation rate increases from 51.78 percent in the BL treatment to 74.54 percent in the AD treatment. Likewise, the average size of pledge increases from 434.46 rupees in the BL treatment to 644.62 rupees in the AD treatment. In the same way, the average donation as a percentage of the average expenditure increases from 1.34 percent in the BL treatment to 1.98 percent in the AD treatment. We expected that the larger number of pledges would be composed mainly of small pledges. However, Figure 6 shows that the level of pledges in the AD treatment is larger than the level of pledges in the BL treatment. A comparison of distributions in Figure 6 also indicates that the absolute number of small donations actually decreases in the AD treatment. Though there were some small pledges ranging from 10 rupees to 50 rupees, but there is also a large pledge of 6000 rupees. This shows that by disclosing all the information, a fund raiser can better achieve the target fund. However, the Wilcoxon Rank-Sum test shows that the distribution of AD treatment is weakly different from the distribution of BL treatment (p=0.10).

Fig. 6. Distribution of Pledges across BL and PD Treatments



6. CONCLUSION

This study is motivated by the previous literature that emphasises the role of information framing on economic behaviour. Here, we analyse the impact of informational frame on charitable pledges. The study is based on an experiment in a fund raising project named as Helping Students through Students. We solicit pledges from 395 students in the School of Economics, Quaid-i-Azam University, Islamabad. We randomly divide the students into 5 different treatments. In the PD treatment, we provide information to students about the average size of pledge made by students in the BL treatment. Similarly, in the ND treatment, we provide information about the total need of those who had asked for donations in the first round of the experiment. In the P&ND treatment, we inform the students about both the need as well as the pledge made by students in the BL treatment. Finally, in the AD treatment, we provide the details about the need, the pledges made in the BL treatment, the previous history of the project, and the pledge made by the Charity Australia International.

We find an increase in the average level of pledge with the informational frame of disclosing all types of information, i.e. AD treatment. On the other hand, we find the lower size of average pledge in the treatments where we only provide the pledge in the BL treatment or the need of the others, i.e. PD and ND treatments. Moreover, we find substitutability of charitable pledges in the PD treatment while complementarity of charitable pledges in the P&ND and AD treatments. Our finding in the ND treatment is in line with the earlier studies which are based on survey instead of experiments [Arumi, *et al*. (2005); Diamond and Kashyap (1997)].

Our results are of interest for fund-raising practitioners. For instance, our data on pledges show that by providing all information, the fund-raisers can increase the pledge amount. However, the limitation of the study is a possible presence of experimenter demand effect. The reason is that two of the authors are permanent faculty members in

the School of Economics (SOE) where this experiment was conducted. We suspect the presence of the experimental demand effect due to the difference between the pledged and received amount in the account of the trust. It is worth mentioning that the total deposited amount was less than the pledged amount till the due time given to students and the final submission of this paper. Future research can explore whether findings of our experiment will change if campaign is run by aliens in the SOE or the same experimenters run campaign in other departments without disclosing their designations. Likewise, it will be interesting to know whether the amount of pledge changes if participants had to disclose their identity or if they are informed about the tracking of their pledges.

APPENDIX A

HELPING STUDENTS THROUGH STUDENTS

INSTRUCTIONS FOR THE RECEIPENTS

We know that there are many students in QAU who need financial help for pursuing their studies smoothly. Howerver, their ego and self-respect discourage them to ask for help and support. On the other hand, there are many students who are willing to help such needy stdudents, but are unable to find them due to time and information constraints. In the jargons of economics there exists demand and supply for help however, market forces are unable to match them efficently.

We (myself and some alumani of QAU) have started a project named "Helping Students Through Students" to bridge this gap and link the donors students with the needy students.[12] In this regard we have registered a Trust named "ROSHNI TRUST" with the government of Pakistan under 1882 trust act. After formal registration of the trust and opening an account on the name of ROSHNI TRUST in Askari Bank QAU branch, we are for the first time launching a compaign to help students through students. The compaign has two objectives.

(1) Raising fund from students in this semester and transferring the same fund to needy students in the next semester.
(2) Doing a systemtic analysis of the compaign for research purposes
(3) In the first round of the compaign we need information about deserving students. If you think that you need financial support next semester from this project of "Helping Students Through Students", then kindly provide us the following details on a plain page.

- Name
- Father's Name
- CNIC No.
- Email:
- Contact No.
- Per month need in the next semester (Feburary to June 2014)

[12]My Name is Dr Anwar Shah, Assistant Professor in the School of Economics QAU.

- Brief details of the background due to which you need financial support next semester

We assure that the provided information will remain confidential and never be disclosed. We will try our best that the self-respect of the students is not compromised. Please send us the required information on the following address:

Dr Anwar Shah
Assistant Professor, School of Economics, Quaid-i-Azam University, Islamabad.

You can also submit your sealed enevelop after writing the above full adress at the front desk of School of Economics. The deadline for sending your details is Monday 25 November 2013. You will receive a confirmation email or text once we receive your details.

Note: The final selection will be made by a committee

HELPING STUDENTS THROUGH STUDENTS

INSTRUCTIONS FOR THE DONORS

We know that there are many students in QAU who need financial help for pursuing their studies smoothly. Howerver, their ego and self-respect discourage them to ask for help and support. On the other hand, there are many students who are willing to help such needy stdudents, but are unable to find them due to time and information constraints. In the jargons of economics there exists demand and supply for help however, market forces are unable to match them efficently.

We (myself and some alumani of QAU) have started a project named "Helping Students Through Students" to bridge this gap and link the donors students with the needy students.[13] In this regard we have registered a Trust named "ROSHNI TRUST" with the government of Pakistan under 1882 trust act. After formal registration of the trust and opening an account on the name of ROSHNI TRUST in Askari Bank QAU branch, we are for the first time launching a compaign to help students through students. The compaign has two objectives.

(1) Raising funds from students in this semester and transferring the same funds to needy students in the next semester.
(2) Doing a systemtic analysis of the compaign for research purposes

To day we are running the second round of this compaign. In this round we ask you for donations in the form of pledges. Once we receive your pledges, we will add them up and after due scrutiny pass them on to the deserving students. Priority will be given to the deserving students from the school of economics. We will appreciate, if you could indicate a deserving student whom you would like your money to be passed on. All information regarding your donations and the students whom you would like to sponsor will not be disclosed in any platform without your prior approval.

[13]My Name is Dr Anwar Shah, Assistant Professor in the School of Economics QAU.

We will urge you to ensure that your pledge amount reaches to the account of Roshni Trust before 30 December 2013. Please note that your pledge is completely voluntary hence avoid making a pledge which you cannot pay by the due date. If the promised amount will not be received by the due date, we will be unable to start processing the applications of needy students. Hence you are urged again to make realistic pledge and transfer it to the account of Roshni Trust before the deadline with in due time.

Following is the details of the account of ROSHNI TRUST.

Title of Account:	Roshni Trust
Account Number:	1500 39000 4256
Bank:	Askari Bank Limited
Branch:	Quaid-i-Azam University Islamabad
Swift:	ASCMPKKA

HELPING STUDENTS THROUGH STUDENTS

A WELFARE PROJECT OF ROSHNI TRUST
PLEDGE FORM

Please encircle one option from the list (A to E) given below

(A) I want to sacrifice two cups of tea per day and donate 12*2*(16*7)= 2688
(B) I want to sacrifice one cup of tea per day and donate 12*1*(16*7)= 1344
(C) I want to sacrifice half a cup of tea and donate 6*1*(16*7)= 672
(D) I want to contribute Rs---------- (write down the amount)
(E) I wish to contribute; however, my budget constraint is low at the moment so cannot make a pledge

Note: In option A to C, the amount of pledge has been calculated assuming 16 weeks of teaching per semester.

Please fill the following brief survey

- Your Gender
  Male
  Female
- How much is your approximate montly expenditure in the university: Rs -------
- Who supports your above mentioned monthly expenditure?
  Parents
  Rrelatives
  Friends
  Others ---------- ---------- (Please mention)
- Would you like to disclose your name?
  Yes
  No
- If yes, then please write your name:----------

- Would you like a reminder for submitting your pledge before one week of the due date
  Yes
  No
- If Yes please give us your email and contact number:
  Email:
  Contact No.
- Would you like to name the students whom your donation is to be transferred?
  Yes
  No

If Yes, then please mention the name, semester and class of such student
Name:----------
Semester:---------- Class: BS/MSs/MPhil

REFERENCES

Abbasi, A. S. (2011) Philanthropic Sector of Pakistan: Performance and Ripple Effect. *World Applied Sciences Journal* 12:4, 491–495.

AKDN (2000) Philanthropy in Pakistan: A Report of the Initiative on Indigenous Philanthropy. The Aga Khan Foundation.

Andreoni, J. (1989) Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence. *The Journal of Political Economy* 1447–1458.

Andreoni, J. (1990) Impure Altruism and Donations to Public Goods: A Theory of Warm-glow Giving. *The Economic Journal* 100:401, 464–477.

Andreoni, J. (1993) An Experimental Test of the Public-goods Crowding-out Hypothesis. *The American Economic Review* 1317–1327.

Andreoni, J. and A. A. Payne (2011) Is Crowding-out Due Entirely to Fundraising? Evidence from a Panel of Charities. *Journal of Public Economics* 95:5, 334–343.

Arumi, A. M., R. Wooden, J. Johnson, S. Farkas, A. Duffett, and A. Ott (2005) *The Charitable Impulse*. New York: Public Agenda.

Asheim, G. B. (1991) Unjust Intergenerational Allocations. *Journal of Economic Theory* 54:2, 350–371.

Barro, R. J. (1974) Are Government Bonds Net Wealth? *Journal of Political Economy* 80:6, 1095–1117.

Bryan, J. H. and M. A. Test (1967) Models and Helping: Naturalistic Studies in Aiding Behaviour. *Journal of Personality and Social Psychology* 6:4, 400–415.

Clotfelter, Charles and E. Stuerle (1981) Charitable Contributions. In Henry Aaron and Joseph Pechman (eds.) *How Taxes Affect Economic Behaviour*. Washington, DC: The Brookings Institution. 403–437.

Diamond, W. D. and S. Gooding-Williams (2002) Using Advertising Constructs and Methods to Understand Direct Mail Fundraising Appeals. *Nonprofit Management and Leadership* 12:3, 225–242.

Duncan, B. (2004) A Theory of Impact Philanthropy. *Journal of Public Economics* 88:9, 2159–2180.

Eckel, C. C., P. J. Grossman, *et al*. (2005) An Experimental Test of the Crowding Out Hypothesis. *Journal of Public Economics* 89:8, 1543–1560.

Ghaus-Pasha, A., H. Jamal and M. Asif Iqbal (2002) Dimensions of the Nonprofit Sector in Pakistan. Social Policy and Development Centre in collaboration with Aga Khan Foundation (Pakistan) and Centre for Civil Society. Johns Hopkins University, USA.

Khanna, J., J. Posnett, *et al*. (1995) Charity Donations in the UK: New Evidence Based on Panel Data. *Journal of Public Economics* 56:2, 257–272.

Khanna, J. and T. Sandler (2000) Partners in Giving: The Crowding-in Effects of UK Government Grants. *European Economic Review* 44:8, 1543–1556.

Kumru, C. S. and L. Vesterlund (2002) The Effect, of Status on Voluntary Contribution. *New York Times.* A13.

Lincoln, A. J. (1977) Effects of the Sex of the Model and Donor on Donating to Amsterdam Organ Grinders. *The Journal of Social Psychology* 103:1, 33–37.

List, J. A. and D. Lucking-Reiley (2002) The Effects of Seed Money and Refunds on Charitable Giving: Experimental Evidence from a University Capital Campaign. *Journal of Political Economy* 110:1, 215–233.

Mathur, A. (1996) Older Adults' Motivations for Gift Giving to Charitable Organisations: An Exchange Theory Perspective. *Psychology and Marketing* 13:1, 107–123.

Nikiforakis, N. (2010) Feedback, Punishment and Cooperation in Public Good Experiments. *Games and Economic Behaviour* 68:2, 689–702.

Olson, M. (1965) *Logic of Collective Action; Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.

Payne, A. A. (1998) Does the Government Crowd-out Private Donations? New Evidence from a Sample of Non-profit Firms. *Journal of Public Economics* 69:3, 323–345.

Payne, A. A. (2001) Measuring the Effect of Federal Research Funding on Private Donations at Research Universities: Is Federal Research Funding More Than a Substitute for Private Donations? *International Tax and Public Finance* 8:5-6, 731–751.

Radley, A. and M. Kennedy (1992) Reflections upon Charitable Giving: A Comparison of Individuals from Business. 'Manual' and Professional Backgrounds. *Journal of Community and Applied Social Psychology* 2:2, 113–129.

Reingen, P. H. (1982) Test of a List Procedure for Inducing Compliance with a Request to Donate Money. *Journal of Applied Psychology* 67:1, 110.

Ribar, D. C. and M. O. Wilhelm (2002) Altruistic and Joy-of-Giving Motivations in Charitable Behaviour. *Journal of Political Economy* 110:2, 425–457.

Rose-Ackerman, S. (1996) Altruism, Nonprofits, and Economic Theory. *Journal of Economic Literature* 701–728.

Rose-Ackerman, S. (1986) Do Government Grants to Charity Reduce Private Donations? In S. Rose-Ackerman (ed.) *The Economics of Nonprofit Institutions*. New York: Oxford University Press.

Siegel, S. (1956) *Nonparametric Statistics for Behavioural Sciences*. New York: McGraw-Hill.

Smith, J. R. and A. McSweeney (2007) Charitable Giving: The Effectiveness of a Revised Theory of Planned Behaviour Model in Predicting Donating Intentions and Behaviour. *Journal of Community and Applied Social Psychology* 17:5, 363–386.

Steinberg, R. (1991) Does Government Spending Crowd Out Donations? *Annals of Public and Cooperative Economics* 62:4, 591–612.

Straub, J. D. (2003) Fund-raising and Crowd-out of Charitable Contributions: New Evidence from Contributions to Public Radio. Manuscript, Texas A&M University.

Vesterlund, L. (2003) The Informational Value of Sequential Fundraising. *Journal of Public Economics* 87:3, 627–657.

Vriens, M., H. R. Van der Scheer, *et al*. (1998) Conjoint Experiments for Direct Mail Response Optimisation. *European Journal of Marketing* 32:3/4, 323–339.