Australian School of Business Research Paper No. 2013 ECON 22

Do donors care about the price of giving? A review of the evidence, with some theory to organize it

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DO DONORS CARE ABOUT THE PRICE OF GIVING?
A REVIEW OF THE EVIDENCE, WITH SOME THEORY TO ORGANIZE IT

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ABSTRACT

We study how donors decide which charity to give to. To this end, we construct a theoretical model that clarifies the conditions in which the stand-alone benefit from giving, price of giving, and cost of information acquisition inform giving decisions. The model shows that giving decisions are affected by a price-cost trade-off – a condition where donors care about the price of giving because they want their donations to maximise charitable output, but dislike searching for the price of giving because it is costly. The literature is then reviewed to test the explanatory power of the theoretical model: it seems to support the conjecture that a price-cost trade-off informs donors' giving decisions.

1. INTRODUCTION

The emergence of entities whose objective is to help donors make "smart" giving decisions seems to suggest that donors are demanding more information on the efficiency and effectiveness of not-for-profits (e.g. see http://www.icfo.org; Yetman, 2009; Saxton et al., 2011; Bekkers 2003, 2010). However, it is occasionally argued that donors do not use efficiency and effectiveness to guide their giving decisions (e.g., Arumi et al., 2005; Breeze, 2010; Sargeant, 1999; 2006; 2010). If this were generally true, then the various means of charity quality assurance, such as charity watchdogs and disclosure-related regulation, would be wasted. We thus review what we know about the effect of the price of giving on donations. In particular, we ask:

How do donors decide which charity to give to; and
Do donors use the price of giving to guide their giving decisions?

To answer these questions, we construct a theoretical model that specifies the conditions in which the price of giving influences donors' giving decisions. A "utility function" is the economist's way of capturing the (psychological) benefits the donor receives from giving. We assume the donor's utility function contains three components: the stand-alone benefit from giving (Component 1), the price of giving (Component 2), and the cost of acquiring information about the price of giving (Component 3), which may consist of effort cost as well as out-of-pocket expenses. The price of giving (Component 2) describes the price of purchasing charitable output. The price of giving increases when the charity uses more donations on fundraising and administration expenditure, as it means the donation purchases less charitable output.

We initially make two simplifying assumptions in our discussion of the theoretical model: each charitable cause is supported by only one charity and information is perfect. These assumptions are successively relaxed to paint a more realistic picture of the way in which donors make giving decisions.

The main insight from the model is that the typical donor faces a price-cost trade-off, which occurs when the donor is not well informed about the charity's price of giving but wants to use it to guide her giving decision. The donor who faces the price-cost trade-off searches for the charity's key financial and performance-related indicators or some substitute information that might be provided by third parties, but her search is costly in terms of time, effort, and money. She thus experiences disutility from acquiring information. As a result, the donor is

willing to forgo giving to the charity with the lowest price of giving to avoid exerting too much costly effort.

The price-cost trade-off has three implications. First, the donor who faces the price-cost trade-off uses strategies to minimize the amount of costly effort associated with information acquisition. For example, she might use short-cuts, such as watchdog agencies or seals of approval, to guide her giving decisions. Second, a charity that uses donations on fundraising and advertising expenses might actually receive a greater level of donations if these expenditures decrease the donor's cost of information acquisition. Third, to the extent that the provision of information has strong public-good components to it, important public policy and welfare considerations emerge from our analysis for the funding of watchdog agencies or seals of approval.

Through the literature review, we test the hypothesis that donors experience a price-cost trade-off by assessing whether donors care about the price of giving (i.e. Component 2) and attempt to minimise the amount of costly effort associated with searching for the price of giving (i.e. Component 3). If the answer is yes to both these questions, then we can infer that donors do indeed face a price-cost trade-off.

2. THE THEORETICAL MODEL

2.1 THE BASIC SET-UP

We use simple tools from economics to formalize whether, and how exactly, the price of giving informs donors' giving. The discussion is based on the concept of "utility", which is an economist's way of explaining what motivates an individual to consume a good or behave a certain way (Varian, 2006). We assume the individual makes decisions that maximize her benefits net of costs. In economics parlance, she makes decisions that maximize her utility.

In our basic set-up, the donor lives in a two-charity economy – she can either give to a dog or a cat charity. Her objective is to give to the charity that maximizes her utility. Her utility function consists of three components: her stand-alone benefit from giving (Component 1); the price of giving (Component 2); and the cost of acquiring information about the price of giving (Component 3). The interaction of these components determines the level of utility she receives from giving.

Component 1: Stand-alone benefit from giving

Donors give to charitable causes for a number of reasons. A donor might give because she values the output provided by the charity (Vesterlund, 2006), to feel the "joy of giving" (Andreoni, 1989), or to fulfil a duty she believes the privileged are bound by (Sen, 1977). She might give to avoid the disapproval of others, to receive praise from others, or to signal her wealth in a socially acceptable way (Harbaugh, 1998; Glazer & Konrad, 1996). For our present purpose, we do not discuss the reasons for giving. We instead assume that the donor gives because she receives some form of benefit ("utility") from doing so.

The donor might receive different degrees of utility from giving to causes. Her willingness to give to a cause positively corresponds to the level of benefit she receives from giving to it. For instance, suppose the donor prefers dogs to cats. She thus receives a higher level of benefit from giving to a dog charity than to a cat charity provided all other things, such as the cost of information acquisition and the price of giving, are the same.

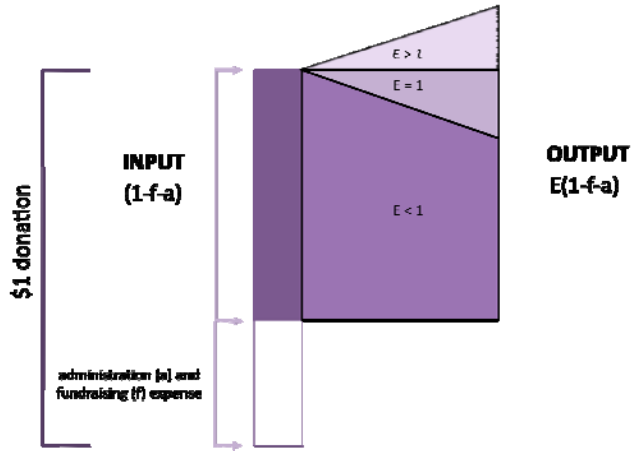
We use the term "taste" to describe the donor's internal ranking of, or willingness to give to, different charitable causes. Three categories are used to describe the donor's taste: uniform, peak-shaped, and intermediate preferences. The donor with uniform preferences likes each charitable cause equally, and so receives the same amount of benefit from giving to each cause; a donor with peak-shaped preferences prefers one cause above all other causes, and so receives more benefit from giving to her favourite cause to all others; and a donor that has neither uniform nor peak-shaped preferences has intermediate preferences.[1]

Component 2: Price of giving

Following Weisbrod & Dominguez (1986), the price of giving reflects the proportion of donations the charity spends on producing charitable output. Specifically, for every dollar worth of donations the charity receives, the charity spends a portion on administration (a) and fundraising expenses (f). The charity thus has $(1-f-a) worth of donations it can use to purchase charitable output. The price of giving decreases when the charity uses a smaller portion of its donations on administration and fundraising expenses, $(1-f-a), as it means a larger portion of donations can be used to purchase charitable output. Conversely, the price of giving increases when the charity uses a larger portion of its donations on administration and fundraising expenses, as it means donations are less able to purchase charitable output. The price-sensitive donor prefers giving to a charity with a low price of giving than to a charity with a high price of giving.

[1] We do not answer the question of how these preferences arise, as it is not within the scope of the current paper. For our present purpose, we assume that preferences are given.

FIGURE 1: PRICE OF GIVING



We caveat that the price of giving might be used as a proxy for the scale of output delivered by the charity, which in Figure 1 is where E=1, even though different charities might produce different levels of output with the same amount of input (i.e. donations), which in Figure 1 are where E > 1 or E < 1. Formally, for every $(1-f-a) worth of input the charity spends on purchasing charitable output, it produces $E(1-f-a) worth of charitable output. $E(1-f-a) is thus the level of *output* the charity produces using $(1-f-a) worth of *input.* If E = 1, the amount of output the charity produces equals the amount of input it spent – after administration and fundraising expenses – on the charity's mission. If E > 1, the charity produces more output than the amount of input it spent on the charity's mission. If E < 1, the charity produces less output than the amount of input it spent on the charity's mission.[2] For ease of exposition, we assume that E=1 for the remainder of the paper – that the amount the charity spent on charitable output (i.e. input) equals the amount of charitable output actually produced (i.e. output).

Component 3: Cost of information acquisition

[2] Suppose Charity A and Charity B spends $0.2 of a $1 donation on administration and fundraising expenses. Suppose, also, that Charity A uses $0.8 to *produce* $2 worth of charitable output (E>1), but Charity B uses $0.8 to *produce* $0.5 worth of charitable output (E<1). Though both charities spent equal amounts of money on producing output, Charity A *produced* more output than Charity B. Examples where a charity that uses less input produces more charitable output are easy to construct (and left as an exercise to the readers). It is only in the special case, E = 1, that input equals output.

A donor who uses the price of giving to guide her giving decisions will be indifferent between Charity A and B, even though Charity A is more worthy of being financed, all other things being equal, as it produces more output with the same amount of input. When input does not perfectly correspond to output, donations may flow to less deserving charities.

The amount of output produced by charities is arguably related to the level of outcomes produced by the charity, as opposed to output. Needless to say that measuring outcomes, or social impact, is a major challenge (e.g., Forbes 1998, or Herman & Rentz 1999, or recent attempts to measure social impact.)

The typical donor is not well informed about charities. If the donor cares about the price of giving, she will exert effort to learn about the charity's performance: she could read the charity's annual report, search for "efficiency" measures such as administration or fundraising ratios, or use some substitute information that might be provided by third parties, such as certification agencies. Her search to verify the price of giving, however, is costly in terms of effort, time, and money. She thus becomes increasingly unhappy as the cost of information acquisition increases.

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The donor's objective is to give to the charity that maximizes her utility, as shown in equation (1). Her net utility increases as her stand-alone benefit from giving increases, and decreases when the price of giving and the cost of acquiring information increases.

Net Utility = Stand-alone benefit –Price of giving–Cost of information acquisition *(1)*

2.2 THE TASTE-PRICE TRADE-OFF

We make two initial assumptions to structure our discussion of the utility function:

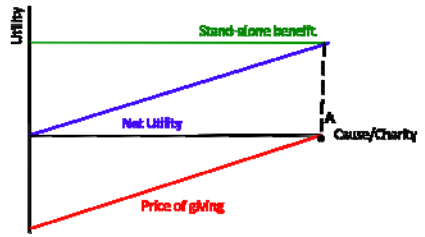
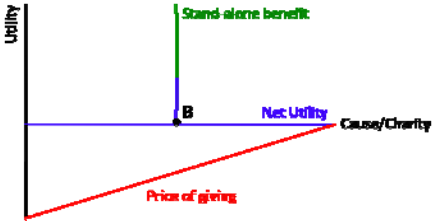
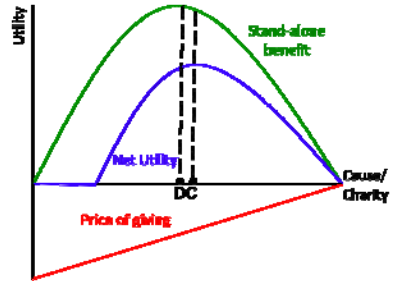
1) Each cause is supported by one charity; and
2) Information is perfect – donors know the price of giving of all charities.

Component 3 – the cost of information acquisition on the price of giving – is thus absent from the present discussion. These assumptions will eventually be relaxed to increase the external validity of the model. We will also expand our two-charity economy into a many-charities economy to better reflect reality.

Under certain conditions, the donor with the utility function in equation (1) experiences the taste-price trade-off, which is a trade-off between the donor's stand-alone benefit from giving to charitable causes (Component 1) and aversion towards charities with a high cost of giving (Component 2). The taste-price trade-off is explained in Table 1. The first column defines the donor's preferences; the middle column describes how preferences inform giving decisions; and the third column diagrammatically depicts the taste-price trade-off, where the y-axis represents the donor's net utility and the x-axis represents the different charitable causes. Since we assumed that each cause is supported by one charity only, the x-axis can be thought of as lining up all charities. The charities are sorted along the x-axis from those with the highest price of giving to the left to those with the lowest price of giving on the right. The red line depicts the disutility that is generated from the price of giving. It is upward sloping to show that the donor experiences increasingly less disutility as the price of giving decreases. The green line depicts the donor's stand-alone benefit from giving to each cause, and the blue

line depicts the donor's net utility from giving to the charity. Recall that the donor's net utility equals her stand-alone benefit from giving to a cause minus the disutility generated from the price of giving to the charity that fends for that cause. In the diagram, the donor gives to the charity that corresponds to the point where the donor's net utility (i.e. blue line) is highest on the y-axis, as giving to this charity maximizes her net utility.

TABLE 1: TASTE-PRICE TRADE-OFF

	DEFINITION OF PREFERENCE	PREFERENCES AND THE TASTE-PRICE TRADE-OFF	DIAGRAM
UNIFORM	A donor with uniform preferences receives the same level of benefit from giving to each cause (i.e. green line).	The donor's net utility from giving (blue line) equals her stand-alone benefit from giving to a cause (green line) minus the disutility felt from giving to the charity that fends for that cause (red line). The donor with uniform preferences maximizes her net utility by giving to the charity with the lowest price of giving, as she experiences the least disutility from giving to it (i.e. charity A). Therefore the price of giving alone informs the giving decisions of the donor with uniform preferences.	
PEAK-SHAPED	A donor with peak-shaped preferences only receives stand-alone benefit from giving to one cause. Hence, her willingness to give to all but one cause is zero, but is positive and strong for a single cause (i.e. green line).	The donor gives to her favourite cause if the benefit from giving (i.e. green line) is greater than the disutility felt from giving to the utility that fends for that cause (red line). This condition is satisfied in the diagram (i.e. charity B). As the donor does not receive benefit from giving to other causes, she never gives to the charities that fend for those causes, as not giving (i.e. obtaining a utility of 0) is better than giving (i.e. obtaining a negative utility). Therefore taste alone informs the giving decisions of the donor with peak-shaped preferences.	
UNIFORM PM	A donor with intermediate preferences receives benefits from supporting more than one cause, but prefers giving to some causes more than others.	A donor with intermediate preferences might not give to the charity that fends for her favourite cause (the one that gives her the highest stand-alone benefit), charity D, as it may not maximize her utility. This might happen when another charity (e.g., charity C) has a low price of giving and gives her high stand-alone benefit, such that giving to this charity yields a greater net utility than if she gave to her favourite cause. Therefore the price of giving and taste informs the giving decisions of the donor with intermediate preferences.	

The donor's preference type influences her giving decision. A donor with uniform preferences derives the same stand-alone benefit from giving to all charities, and so uses price to differentiate among them. She ultimately gives to the charity with the lowest price. A donor with peak-shaped preferences derives stand-alone benefit from giving to only one cause, and so prefers giving to her favourite cause to all other causes. Giving decisions are thus driven by "taste" for the donor with peaked-shaped preferences, but are driven by "price" for the donor with uniform preferences. The donor whose preference is neither peak-shaped nor uniform has intermediate preferences. Her giving decision is driven by both taste and price.

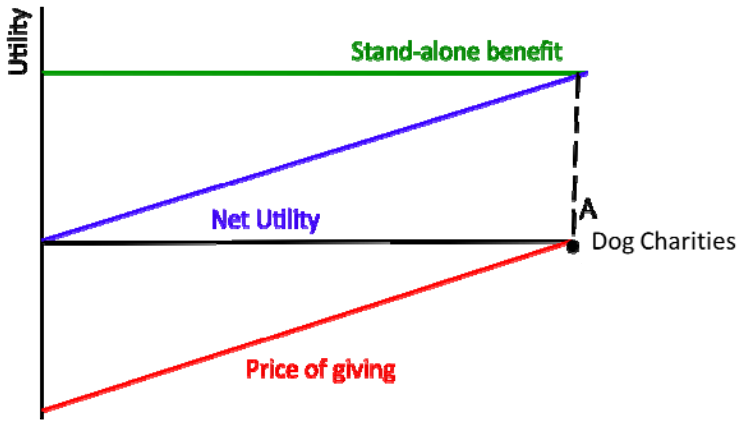
Hypothesis 1: When each cause is supported by one charity and there is perfect information, the giving decision of a donor:

A. with uniform preferences is motivated by the price of giving;
B. with peak-shape preferences is motivated by taste; and
C. with intermediate preferences is motivated by taste and the price of giving.

Relaxing assumption 1: Many charities support one cause

The assumption that each cause is supported by only one charity is clearly unrealistic. For instance, World Vision, Oxfam and UNICEF support the plight of children in developing countries; the Salvation Army and Mission Australia seek to alleviate juvenile homelessness in Australia. We therefore relax assumption 1 by letting many charities support a single cause.

FIGURE 2: DONOR WITH PEAKED-SHAPED PREFERENCES



When many charities support a single cause, the donor with peak-shaped preferences becomes formally equivalent to a donor with uniform preferences when both assumptions hold (Figure 2). For example, suppose the donor only wishes to give to dog charities. She receives the same stand-alone benefit from giving to any charity that supports the plight of stray dogs,

such as the RSPCA, Doggie Rescue, or the Animal Welfare League NSW (i.e. green line). Since the donor cannot distinguish which charity to give to based on stand-alone benefit alone, but possesses information about charities' prices of giving, she uses price to distinguish which charity to give to (i.e. red line). She thus maximizes her utility by giving to the charity with the lowest price, as she experiences the least disutility from giving to it (i.e. charity A). This argument can also be applied to the donor with intermediate preferences.

> *Hypothesis 2:* When a cause is supported by many charities and information is perfect, the price of giving informs all giving decisions, regardless of the preference type of the donor.

An implication of the model is that when there are many charities and donors, and when information is perfect, donors give to the charity with the lowest price. Charities are thus forced to produce output at the lowest price possible, lest they lose donations to charities that provide the same goods and/or services at a lower price. The charity market thus becomes akin to a perfectly competitive market, where charities compete for donations through price.

2.3 THE PRICE-COST TRADE-OFF

The charity market is far from perfect because information is imperfect. In economic parlance, the charity market is afflicted with information asymmetry – donors do not know charities' prices of giving and charities have better information about their price than donors. We thus relax assumption 2, that information is perfect, to move the model closer to reality. To allay information asymmetry, the price-sensitive donor exerts costly effort to search for charities' key financial and performance-related indicators, or at least some substitute information that might be provided by third parties. However her search is costly in terms of time, effort, and money, and thus she experiences disutility from searching. This price-cost trade-off is illustrated in the following scenarios.[3]

Scenario 1: The donor strongly dislikes searching for charities' price of giving.

The donor desires to give to a charity with a low price of giving, but never searches for it because her aversion to effort is too strong. If the donor's stand-alone benefit from giving to her favourite cause is greater than the expected disutility from giving to a charity with a high price of giving, she gives to any charity that supports her favourite cause(s). If the donor's stand-alone benefit from giving to her favourite cause is smaller than the expected disutility from giving to a charity with a high price of giving, she never gives.

[3] These are indeed only illustrations; a more formal analysis would be necessary to provide crisp predictions for aggregate outcomes and specific donor behaviour.

Scenario 2: The donor strongly dislikes giving to a charity with a high price.

The donor experiences extreme disutility from giving to a charity with a high price, and so is willing to search for the charity with the lowest price under certain conditions. If the donor's stand-alone benefit from giving to her preferred cause is large, she is willing to exert effort to avoid the disutility of giving to a charity with a high price. If the donor's stand-alone benefit from giving to her preferred cause is low, she is not willing to exert effort to search for the price of giving, and thus decides to not give.

Scenario 3: The donor finds ways to decrease the amount of effort she needs to exert to acquire information on charities' price of giving.

Suppose the donor is aware of three charities that support her favourite cause, dogs. Depending on her aversion to effort, she might make a random giving decision among the charities that she happens to know of, or might exert effort to acquire more information on them. For the donor who is willing to exert a little bit of effort because she values the price of giving, charity watchdogs and/or seals of approvals would act as an appropriate mechanism to help guide the donor's giving decision, while decreasing the amount of effort she would need to exert to acquire information on charities.

The scenarios illustrate three implications of the price-cost trade-off:

1. The behaviour of the donor who faces the price-cost trade-off can be observationally equivalent to the donor with peak-shaped preferences in Section 2.2, whose giving decision was driven by taste. For example, suppose the donor's favourite cause is dogs, and the only charity she is aware of that supports dogs is the RSPCA. If the donor faces the price-cost trade-off and believes that the RSPCA has a sufficiently low price of giving, she gives to it. She thus behaves like a donor whose "taste" caused her to give indiscriminately to any charity, even though it was her aversion to effort that drove her behaviour.
2. Fundraising and advertising expenses might increase donations if they help decrease the donor's cost of information acquisition. Fundraising and advertising expenses thus have countervailing effects on giving. On the one hand, they increase the price of giving, which decreases the donor's willingness to give to the charity. On the other hand, they decrease the cost of information acquisition by increasing the charity's publicity, which may increase the level of donations the charity receives.
3. The donor who faces the price-cost trade-off would welcome tools that can help minimise the amount of costly effort associated with information acquisition, such as certification agencies or charity watchdogs, or even observing and imitating celebrity,

family or friends' giving behaviour. Thus, strong public policy and welfare implications for the funding of watchdog agencies are suggested by the theoretical model.

Hypothesis 3: When many charities support a single cause and information is imperfect:

A. Donors that face the price-cost trade-off might behave like the donors with peaked-shape preferences in Section 2.2;
B. Fundraising and advertising expenditure that raises the profile of the charity can result in greater donations; and
C. Donors who face the price-cost trade-off use shortcuts to minimize the amount of costly effort associated with searching for charities' price of giving.

Hypothesis 3 raises an important policy issue. It concerns the possibility that such fundraising and advertising (which by its nature is both self-serving and excessive) is a social waste and that information acquisition could be done much better through charity watchdogs and/or seals of approvals, as it would be less self-serving and likely to be less excessive. Due to the public-good aspects of information, watchdogs and/or seals of approvals would also be more cost-effective than fundraising and/or advertising expenditure.

2.4 SUMMARY OF THEORETICAL FRAMEWORK

The hypotheses from the theoretical framework are summarized in Table 2, and are based on the assumptions that each cause is supported by one charity, and that information is perfect. These assumptions were gradually relaxed to add external validity to the model. When assumptions 1 and 2 are relaxed, the theoretical model suggests that donors might face a price-cost trade-off.

TABLE 2: SUMMARY OF THEORETICAL FRAMEWORK

Donor's preference	Assumptions 1 and 2 hold	Assumption 2 is relaxed	Assumptions 1 and 2 are relaxed.
Uniform	Price matters	The price of giving motivates all giving decisions. The charity market becomes perfectly competitive.	Donors are likely to face a price-cost trade-off. To cope, they use short-cuts to minimize effort and to find the price of giving. Fundraising and advertising expenditures that raise the profile of a charity can lead to higher donations but, from a public-policy and welfare point of view, are likely not desirable.
Peaked-Shaped	Taste matters		
Intermediate	Price and taste matters		

3. THE LITERATURE REVIEW

We review studies that address components 2 (i.e. the price of giving) and 3 (i.e. cost of information acquisition) of the utility function developed in Section 2.1, to determine whether the theoretical framework can explain the evidence. We refer the reader to Bekkers & Wiepking's (2011) literature review on philanthropy and mechanisms that drive giving for a detailed exposition of component 1 (i.e. stand-alone benefit)[4]. The questions that frame the literature review are: do donors actually use the price of giving to inform their giving decisions (component 2), and if so, is there evidence that suggest donors try to reduce the cost of information acquisition (component 3)? If the answer is yes to both questions, then we can infer that donors do indeed face a price-cost trade-off.

3.1 DO DONORS CARE ABOUT THE PRICE OF GIVING?

In the theoretical framework, we assumed that the donor experiences disutiliy when her donation is used on activities extraneous to the mission of the organisation, because it increases the price of giving. Hypothesis 2 in Section 2.1 thus predicts that if the donor cares about the price of giving and wants her dollar contribution to maximize the charity's output, charities with a lower price of giving will be rewarded with higher donations. We verify whether this assumption reflects the real world by reviewing survey and empirical evidence.

3.1.1 Survey evidence

Table 2 contains the findings from surveys that address how donors make giving decisions. The responses show that donors are heterogeneous – some value the price of giving and use it to guide their giving, whereas others place less value on it and do not consciously use it to guide their giving decisions.

TABLE 2: SUMMARY OF RESPONSES

Source	Respondents	Response
Hope Consulting (2010)	4000 individuals, from the US, with household incomes over 80K.	Most donors do not research not-for-profits before they give, nor do they give to the "highest performing" not-for-profit. However, out of those who did research before giving to not-for-profits, they often looked for simple efficiency and/or effectiveness metrics to guide their giving decision.
Bagwell et al. (2013)	3000 individuals from the UK, including mainstream	Three in five respondents claimed they paid attention to how donations would be used, and 38% claimed they researched the charity before making large donations.

[4] Bekkers & Wiepking (2011) identify eight drivers of giving: awareness of needs; solicitation; costs and benefits; altruism; reputation; psychology benefits; values; efficacy. Some of their drivers (e.g. efficacy) overlap with Component 2 of the donor's utility function in this paper.

	and high-income donors, and mainstream and high-income non-donors.	Many donors said they care most about how donations are spent and want charities to provide evidence of impact.
Barclays Wealth (2010)	500 affluent individuals from the US and UK	Once the wealthy chose a cause to support, efficiency and the amount spent on administration were the two most important factors that informed which charity they gave to.
Breeze (2010)	60 committed donors in UK	Respondents chose which charities to support based on criteria such as being 'well-run' and 'efficient', or 'charities that don't pay their staff too much' and 'charities that have low overheads'" (Breeze, 2010:35). However, some respondents could not remember the name of the charities or causes they gave to.
Blackbaud (2009)	Nearly 300 from the not-for-profit community in UK	Nearly a quarter of not-for-profits experienced greater demand from donors to report how they spent donations and its impact, and to have audited financial statements, whistle-blower procedures, and perform gift aid internal audits.
The Centre on Philanthropy at Indiana University (2009)	20,000 households in high net worth neighbours across US	Wealthy donors used the following factors to determine which charity to give to: sound business and operational practices, spending of appropriate amount on overhead, and full financial disclosure.[5]
Madden (2006)	Affluent Australians	Respondents that were more concerned about charity wastage, such as administration expenditure, were less likely to give than those who were less concerned about it.
Department of Family and Community Services (2005; 2006; FACS)	Over 6000 Australians	If respondents believed their donation would not be used towards the mission of the charity or would "not make a difference", they were less likely to give.
Arumi et al (2005)	6 focus groups with people who are "civically engaged" in the not-for-profit sector.	Many denied having done research before or after giving, and many were unaware about the existence of IRS990 or watchdog agencies. But "Donors easily recalled the United Way and Red Cross scandal, and a few reported that they had personally 'felt burned'. Still, they didn't stop giving altogether. Instead, they began, specifically and consciously, to direct their money to another organization" (Arumi et al, 2005:13).
Lasby (2004)	14,724 Canadians aged above 15 years	The two most common reasons for not giving relates to personal financial reasons. Other than financial reasons, 38% of non-donors did not give because they did not think that the money would be used efficiently. Similarly, 46% of the donors did not give more because they did not think money would be used efficiently.
Bennett and Gabriel (2003)	161 people from London	Respondents who believed that a charity's compassion, dynamism, wise use of assets and focus on beneficiaries were important reasons for admiring a charity tended to give more to charity than others.

[5] A low proportion of donors stopped giving to a charity they previously supported due to mismanagement of donations, mismanagement of assets or inaccurate record-keeping of donations, which is not surprising. The number of cases where charities are exposed to have mismanaged funds or engaged in suspicious record-keeping is low. In light of this (and the fact that fraud does not get found out often), mismanagement should not be the main reason why donors stop giving.

In line with Hypothesis 2, the survey responses show that many donors value the price of giving; however, the extent to which they use price to inform their giving decisions is varied. For example, Arumi et al's (2005) respondents gave at least $US300 in 2004, but said they did not research the beneficiary charity before or after they gave, while the wealthy respondents from Barclays Wealth (2010) said they often used efficiency measures, such as the amount spent on administration expenses, to guide which charity they gave to (but see Hope Consulting, 2010). These findings are expected, as intuitively small donors would be less concerned with the price of giving than large donors since less money is at stake. Also notice that though many respondents in Arumi et al (2005) claimed they were not interested in the financial details of charities, some diverted their donations from United Way and Red Cross to other charities once news of donation mismanagement emerged[6]. These donors thus behaved in line with price sensitivity, as they switched their financial support to charities with a lower price of giving once the price of their beneficiary charity sharply increased.

The responses also show that donors do not give, or do not give more, if they believe their donations would not be used efficiently or effectively[7] (Madden, 2006; Lasby, 2004), or if they did not know how their donations were being used. Indeed Bagwell et al (2013) argues that donors would give an additional £663 million more in donations if charities could better explain how donations were used and provided evidence of impact.

Observation 1: Based on the survey evidence:

1) Donors use the price of giving to inform the charity they give to; however,
2) The extent to which donors use price to guide their giving decision varies considerably. Some donors, for example, consciously search for metrics to guide their giving decisions, while others do not consciously use price to guide their giving decisions, but will stop giving if their beneficiary charity misuses donations.

Though the survey responses provide strong evidence in support of Hypothesis 2 – that donors are price-sensitive – we note that there are significant limitations associated with the survey methodology. First, surveys that focus on a subset of the population, such as affluent or regular givers, provide a biased representation of the population. Second, survey responses can be subjective, as one person's perception or definition of "efficiency" or "effectiveness"

[6] The Red Cross raised $564 million after the 9/11 terrorist attacks. Donors believed the donations would go to the victims and the families, however more than half of the funds raised were spent on other operations and for future reserves. Also, William Aramony, former CEO of United Ways, used donations on private expenses to finance his lifestyle.

[7] This ties in with what Ortmann & Schlesinger (2003) and Ortmann & Svitkova (2007) term the "credibility problem". Efficiency and effectiveness may be in the present context interpreted as $E > 1$ in Figure 1.

can be different from anothers. Third, it is difficult to verify whether respondents' self-reported behaviour matches their behaviour in real life, as a respondent may claim that she cares about the price of giving (say, to make a particular impression on the interviewer) but actually not act accordingly. The following experiments highlight these limitations.

Borgloh et al's (2013) experiment seems to suggest that differences in perceptions of what constitutes a quality charity can cause subjects to give to smaller sized charities, which the authors interpret as evidence for Duncan's model of "impact philanthropy" (Duncan, 2004). In the experiment, subjects recruited from the population at large were invited to a questionnaire for 30 Euros. At the end of the questionnaire, subjects were given the opportunity to give integer portions of the 40 Euros to one of four causes (disabled care, e development aid, medical research, animal protection). For each of these causes, a pair of charities were offered. In the baseline, no information was provided on the charities. In the treatment, participants could give to either a small (between 40,000 and 300,000 Euro) or large (between 5 and 11 million euro) charity, where size was indicated by the charity's revenue by donations, membership fees, and public subsidies. Out of those who gave, and in contrast to the baseline (where giving was about evenly split to each pair on each cause), 73% gave to the small organisation and only 27% gave to the large organisation. The authors also attempted, as explained in their earlier working paper version (Borgloh et al 2010), to understand why donors prefer smaller charities to larger by conducting an ex-post online survey with the subjects who gave. Their findings suggest that, regardless of which charity the participants gave to, the price of giving motivated their giving decision. Namely, 50% of subjects who gave to smaller charities did so because they believed they had lower administrative costs, and 44% wanted to make a larger impact from their donation. 86% of subjects who gave to large charities did so because they believed "large organisations are more likely to act professionally compared to small ones" and are better equipped to fulfil objectives (43%). Subjects thus gave to the charities that they believed would use their donations to produce more charitable output.

Another limitation associated with survey evidence is that self-reported responses might not align with actual behaviour, as illustrated in Buchheit and Parson's (2006) experiment. In this experiment, all subjects were given a charity fundraising request, and roughly half were also given service efforts and accomplishment (SEA) information, which shows the organisation's effectiveness in achieving its mission (Parsons, 2003). Those who received SEA information found the fundraising request more informative than those who received the basic fundraising appeal. When asked whether they would make a future donation to the charity, those who received the SEA information were more likely to answer yes than those that with the basic

fundraising appeal. However when subjects were given a choice to give $2 to the charity or keep a pen, subjects who received the additional SEA information were more likely to keep the pen than subjects with the basic fundraising request. Subjects' actual behaviour therefore did not align with their self-reported behaviour.

3.1.2 Empirical evidence

In light of the limitations associated with survey evidence, we review empirical studies that examine whether donors reward charities with a lower price of giving with more donations.

In Weisbrod & Dominguez's (1986) price of giving model, the donor purchases chariable *output* in dollar amounts. For every dollar contributed to the charity's output, a portion is spent on expenses other than the output, such as on fundraising and adminstrative expenses. When the portion spent on these other expenses increase, the donor's dollar contribution buys less charitable output. The price of giving (PRICE) thus increases as it costs more to purchase a dollars worth of charitable output. The model is formalised in equation (2):

$$\text{PRICE} = 1/(1\text{-}f\text{-}a) \quad (2)$$ [8]

where f and a represent fundraising and administrative expenses respectively[9]. Equation (2) shows that PRICE is inversely related to fundraising and administrative expense.

Table 3 summarises the results of studies that test whether charities with lower PRICE are rewarded with greater donations. The accounting ratios in the "PRICE variable" column are based on Weisbrod & Dominguez's (1986) price of giving model (equation 2). Column "PRICE" contains the qualitative effect of the "PRICE Variable" on donations. Symbol "+" denotes the PRICE Variable and donations are positively correlated, and implies that donors give more to charities that have a higher price of giving. Symbol "-" denotes the PRICE Variable and donations are negatively correlated, and implies that donors give less to charities that have a higher price of giving. "0" denotes the PRICE variable has a statistically insignificant effect on donations. If donors want their dollar contribution to maximize the

[8] Weisbrod & Dominguez (1986) paper consider the price of donating after tax. Namely, they extend equation (1) to PRICE = (1-t)/(1-f-a), where t is the donor's tax rate. For simplicity, the present discussion takes the after-tax contribution as implicit.

There is also a literature that discusses how tax rebates affects the price of giving. Namely, if donations are tax-deductible, then the price of giving decreases. A review of this literature can be found in Vesterlund (2006).

[9] Note that this equation is the reciprocal of the equation in Figure 2 from Section 2.2.2, and assumes that E = 1.

charity's output, "-" should be observed across the PRICE column. The "Fundraising" column is ignored for now, but will be addressed in Chapter 3.3.4.

TABLE 3: SUMMARY OF FINDINGS

Source	Data	PRICE Variable	PRICE	Fundraising
Weisbrod & Dominguez (1986)	US	(Donations/(Donations – Fundraising expenses)	-	+
Posnett & Sandler (1989)	UK	(Donations/Donations – Fundraising and administrative expenses)	-	+
Callen (1994)	Canada	(Donations/Donations – Fundraising and administrative expenses)	-	+
Bowman (2006)	US	(Donations/1 – Overhead ratio)	-	N/A
Okten & Weisbrod (2000)	US	(Donations/(Donations – Fundraising expenses)	-	+
Frumkin & Kim (2001)	US	Administrative expense/Total expense	0	+
Tinkelman (1998)	US	Total Expenses/Program expenses	-	+
Tinkelman & Mankaney (2007)	US	Administrative expense/Total expense Fundraising expense/Total expense	- -	+
Trussel & Parsons (2008)	US	Total expense/Program expense	-	+
Jacobs & Marudas (2009)	US	Total Expenses/Program expenses Administrative expense/Total expense	- -	+
Marudas & Jacobs (2004)	US	(Donations/Donations – Fundraising and administrative expenses)	Depends on industry	0
Marudas & Jacobs (2007)	US	Total Expenses/Program expenses	0	+

Tinkelman (2004)	US	(Donations/(Donations – Fundraising expenses)	-	+
Marudas (2004)	US	Total Expenses/Program expenses	-	+
Marcuello & Salas (2001)	Spain	Total income/(total income – operating costs – value of the time of volunteers in the office)	-	+
Greenlee and Brown (1999)	US	Fundraising expenses/total expenses*	+	N/A
		Administrative expense/Total expense	-	
Tinkelman (1999)	US	Total Expenses/Program expenses	-	+
Khanna & Sandler (2000)	UK	Total Expenses/Program expenses	-	+
Khanna, Posnett and Sandler (1995)	UK	(Donations/Donations – Fundraising and administrative expenses)	-	+
Marudas & Jacobs (2008)	US	Total Expenses/Program Expenses	-	+
Chen (2009)	US	(Donations/Donations – Fundraising and administrative expenses)	0	+
Gordon et al (2009)	US	Total Expenses/Program Expenses	+	+
Chhaochharia & Ghosh (2008)	US	(Donations/(Donations – Fundraising expenses)	+	0

Statistical significance is at the 10 percent level.

Most studies show that the price of giving (PRICE) and donations are negatively correlated, which implies that donors care about the amount of charitable output they can purchase with donations and so reward charities with a lower price of giving with greater donations.[10] However there are counter-examples (e.g., see Frumkin & Kim, 2001; Marcuelo & Salas, 2001; Greenlee and Brown, 1999; Roberts et al, 2004; Chen, 2009).

> *Observation 2:* Based on empirical studies, donors generally reward charities with a lower price of giving with more donations.

The reader is cautioned that statistical results depend on what econometric tools are used, the type of data analysed, and the regulatory framework imposed at the time of analysis. For example, most studies concerning not-for-profits in the US are based on IRS 990 data. The data contained in IRS 990, however, is self-reported and thus susceptible to manipulation (e.g. see Krishnan et al, 2006; Jones and Roberts, 2006; Keating et al, 2006). The following studies show how these factors can alter the results of econometric studies.

Tinkelman (1999) uses New York State's Charities Database between 1994-96 to show that the extent to which the price of giving informs giving decisions depend on the econometric tools used, and the reliability and relevance of the data. For instance, the price variable is negative when Tinkelman log-linearized his regression, which implies that donors reward organisations with a lower price of giving with greater donations. However when the model is not log-linearized, the price variable has an insignificant effect on donations. He also shows that the type of data analysed can influence the relationship between donations and the price variable. In particular, "relevant" data, which comprise of small charities that are more reliant on donations from donors, exhibit more price sensitivity than large charities that are less reliant on donations. Similarly, less "reliable" data, such as organisations with implausible data (i.e. zero fund-raising or adminstrative expenses in 1993/1994), exhibit less price sensitivity than organisations with plausible data.

Tinkelman & Mankaney (2007) replicate Posnett & Sandler (1989), Greenlee & Brown (1999), and Frumkin & Kim's (2001) studies to verify the effect of the administration ratio on donations. Consistent with Greenlee & Brown (1990) and the findings in Frumkin & Kim (2001), a higher administrative ratio corresponded to a greater level of donation, which contradicts the assumption of price sensitivity. However when they run the same regression

[10] This result may seem surprising in light of in light of the assumption that more inefficient charities are rewarded with greater donations. Note, however, that the variable that speaks to this particular issue is the "Fundraising" variable, and that this particular issue is addressed in Chapter 5.2.

with "relevant and reliable" data[11], the effect becomes negative. In contrast, in their replication of Posnett & Sandler's (1989) study, a higher administrative ratio corresponded to a greater level of donations regardless of the data's quality. The authors posit that this is driven by the less "relevant" nature of the dataset, as it contains less donor-reliant organisations than other datasets. Tinkelman & Mankaney (2007) thus conclude that the effect of administrative efficiency on donations depends on the quality and the type of data used in the regression analysis.

Yetman (2009) uses IRS 990 data between 1985 and 2005 to study the effect of the program service ratio (i.e. service expenses/total expenses; PRS) on donations, which is a measure of how efficiently donations are being used on the mission of the organisation. She finds that over time, higher PRS ratios correspond to a greater level of private giving, and that it sharply increased after 1999. She notes that in 1999, the US government introduced reforms that made information disclosed in the IRS Form 990 accessible to the public, and hypothesises that the sudden ease in which donors could obtain financial information contributed to this increase. The finding thus raises the question of whether studies that use pre-1999 data to study the effect of price on donations are useful, for the cost associated with searching for information pre-1999 would be considerably high.

If a lower price of giving does indeed correspond to greater levels of donations, then investing in watchdog or certification agencies might be a fruitful activity. A seal of approval from a certification agency, for example, guarantees to the donor that the charity spends a reasonable amount on fundraising, advertising, and administrative expenses. Some studies even suggest that such agencies help build trust in the not-for-profit sector, that trust and giving are positively correlated (Bekkers, 2003, 2010), and that a positive rating or a seal of approval thus corresponds to a greater level donations (see Section 3.2.3). These findings, taken together, offer a promising method to increase charitable giving.

3.2 DO DONORS MINIMISE EFFORT?

The theoretical model predicts that if donors care about the price of giving but dislike exerting costly effort, they would use rating agencies, "rules of thumbs", and signals to gauge charities' price of giving, minimize effort, and guide their giving decisions. We thus turn to the literature to find evidence on whether donors face this price-cost trade-off.

[11] "Relevant and reliable" data includes charities that report administrative and fundraising expenses greater than US$1,000, are at least four years old, received more than US$100,000 in donations in prior years, and received donations equal to at least 10% of the previous years revenue.

3.2.1 Do donors use "rules of thumb" to guide their giving decisions?

Donors often use "rules of thumb" to gauge the price of giving and minimise effort (e.g. see Arumi et al, 2005; FACS 2005, 2006; Breeze, 2010). Recall that Arumi et al's (2005) interview with focus groups revealed that most respondents rarely researched the charity before or after giving, nor consulted well known resources such as the Better Business Bureau. Similarly, Breeze's (2010) interview with 60 committed donors from the UK showed that donors often could not recall the charities and causes they supported. Both studies, however, show that donors often applied "rules of thumb" to gauge whether the charity is worthy of support, such as whether they recognise the charity's name ("recognition heuristic"; see Gigerenzer & Todd 1999), how many people volunteer at the charity, or whether they receive a newsletter detailing the charity's accomplishments (e.g. see Arumi et al, 2005; FACS 2005, 2006; Breeze, 2010). Some respondents even claimed that when they suspected their donations were used on expenses extraneous to the cause, such as on flashy and expensive campaigns, they would support another charity (Breeze, 2010).

Bekkers & Brutzen (2007) provide evidence in favour of the price-cost trade-off. In their experiment, fundraising campaign letters were sent in either "flashy" or "plain" envelopes to roughly 90,000 donors on behalf of Netherland's "Church in Action". They found that those who received "plain" envelopes responded and gave more than those who received "flashy" envelopes. The authors posit that this is driven by donors who give and respond less to charitable appeals when they believe fundraising costs are high, as it signals that their donations will purchase less charitable output.

Landry et al (2010) provide similar evidence. In their experiment, donors either received nothing (voluntary contribution treatment; VCM), a small gift (a bookmark), or a large gift (a book) for giving to a Hazards Centre. Those who previously gave (i.e. warm-list donors) were more likely to give and gave nearly twice as much those who never gave (i.e. cold-list donors) in VCM, and actually gave more in the VCM treatment than in the gift treatments. As in Bekkers & Brutzen's (2007) paper, the authors posit that donors' aversion to high fund-raising costs might have driven this behaviour, as it may have signalled that the price of giving is high.

> *Observation 3:* Donors that face the price-cost trade-off and suspect that a charity will spend a large portion of their money on activities other than producing charitable output will reduce their giving, or divert their giving to another charitiable organisation.

Even providing information to donors about a charity's operations can signal its quality. Recall Buchheit and Parson (2006) experiment. Those that received SEA information and the basic fundraising appeal found the information more useful than those who just received the fundraising appeal (see Church & Parsons, 2008 for a similar experiment). McDowell et al (2010) found that most subjects in their experiment gave to the charity once they read about the charity's mission and goals, and most did so without reading the charity's program ratio. Saxton et al (2011) found that charities that disclose more financial and performance-related information on their website receive more donations than those that disclose less.

In particular, Aguiar et at. (2008) and Branas-Garza (2006) show that people are more willing to give when they know who their beneficiary is, and how their donations will be spent. In their experiment, students received an endowment of 15 Euros, which they could give in increments of 5 to centres in Asia, African and South America. A box of medicine was sent to one of the centres for every 5 Euros donated. In the "no-info" treatment, no information was provided about the charity; in the "poverty" treatment, subjects were informed that the recipient was poor; in the "poverty + medicine" treatment, subjects were informed that the recipient was poor and a box of medicine would be sent to them for every 5 Euros donated.[12] 0% gave their endowment in the "no info" treatment, 40.8% gave their full endowment in the "poverty" treatment, and 74.6% gave their full endowment in the "poverty + medicine" treatment. The results suggest that giving and the receipt of useful information on how the charity is using donations to produce charitable output may be positively related.

> *Observation 4:* The presence of (more) information on a charity can lead to more giving.

3.2.2. Do donors use signals to give to charities with a lower price?

Vesterlund (2003) shows that an "announcement strategy" can be beneficial for charities, when acquiring information about the charity's quality is costly for donors. Formally, suppose donor 1 acquires costly information about the charity's quality, and then decides to give to it. If the charity publicly announces donor 1's donation, it signals to potential donors that it is trustworthy, for donor 1 gave to the charity because she verified its trustworthiness. The donor who faces the price-cost trade-off might use the charity's announcement strategy to inform her giving decision – it allows her to cut down on effort cost, whilst giving her more confidence that her donation will go to a worthy, responsible, charity.

[12] The authors used hypothetical and real incentives in the experiment; however, the results across the hypothetical and real treatments were not statistically different.

Karlan & List (2007) test whether the announcement strategy, "matching", influences donations. Matching occurs when a "leader" matches the donations of other donors at a given rate, up to a maximum amount. In their experiment, over 50,000 prior donors were sent fundraising letters about a liberal organisation. Donations were either not matched, or matched at a 1:1, 2:1, or 3:1 ratio, where for every dollar donated, the leader contributes 1, 2, or 3 dollars to the organisation. Karlan & List (2007) found that donors whose donations were matched were 22 percent more likely to give. These donors also gave 19 percent more than donors whose donations were not matched. The larger matched ratios (3:1 and 2:1), however, did not influence the likelihood or amount donated. In a similar study, Karlan et al. (2011) sent 20,000 letters to prior donors on behalf of a civil organisation. Donations were either not matched, or matched at a 1:1 or 1:3 ratio. The authors found that active supporters were positively influenced by matching whereas lapsed supporters were not.

In contrast to the findings of the aformentioned studies, Rondeau & List (2008) find that matching does not increase donations, but challenge gifts do. A challenge gift is when a donor or donors commit to giving a set amount to a charity. In the experiment, 3000 people were asked to support the expansion of a K-12 environmental education program. Solicitations contained a 1:1 match, an announcement that a supporter committed $2,500 to the cause, or neither mechanism. Challenge gifts led to a higher volume and level of donations, whereas 1:1 matching resulted in less donations but elicited a higher frequency of donations. In a similar study, List & Lucking-Reiley (2002) solicited 3000 Central Florida residents for donations to the Centre for Environmental Policy Analysis. They found that increasing the level of the challenge gift contribution from 10 to 67 percent of the campaign goal resulted in nearly a 6-fold increase in overall donations.

Though announcement strategies do not systematically result in a greater level of donations, these field experiments suggest that some donors adopt an announcement strategy – they are more likely to give when there is a "leader" who makes a large contribution, or makes a commitment to match donations up to a given level. A leader who is willing to make such a large, public contribution signals that the charity is trustworthy and will use donations responsibly. The donors who are averse to effort but care about the price of giving might use this information to guide their giving decisions.

> *Observation 5:* The announcement strategy does not systematically result in a greater level of giving. However the results suggest that some donors, and particularly active donors, respond to announcement strategies by increasing their level of giving.

3.2.3 Do donors use agencies to inform their donation decisions?[13]

Watchdog, certification, and rating agencies provide signals to donors about the quality of charities. For example, Charity Navigator rates charities out of 4 stars, and the American Institute of Philanthropy (AIP) provides grades from A+ to F based on how charities perform against set criteria. Similarly, Better Business Bureau (BBB) Wise Giving Alliance in the US, Central Bureau Fondsenwerving (CBF) in the Netherlands, and Deutsches Zentralinstitut fuer soziale Fragen (DZI) in Germany award accreditation seals to charities that comply with their standards. These criteria/standards typically involve whether financial statements are audited, the proportion of donations spent on fundraising and administrative expenses, and how transparent the charity's operations are to the public (Ortmann et al, 2007; Bekkers 2003). By meeting or performing well against these standards, charities signal to the community that they use donations towards producing charitable output – that is, that their price of giving is appropriately low.

Based on the theoretical model, donors who face the price-cost trade-off use these agencies to reduce the cost of information acquisition. These donors give to accredited charities or charities that have high ratings, rather than charities that are not accredited or have low ratings, to ensure their donations are given to charities that abide by good practices. Also, due to the public-good aspects of information, a single agency that reveals all charities' price of giving would be more cost-effective than individual charities that reveal their price of giving.

Table 4 summarizes studies that examine whether rating agencies affect charitable donations. Note that the evidence is under-developed, as rating agencies are a relatively a new phenomenon. US's Charity Navigator, for example, was established in 2001 and is considered the charity watchdog "grand-daddy". In Table 4, the "Increase (Pass)" column contains the qualitative effect of an increase in rating (e.g. from C to C+; two stars to three) or a pass rating on charitable giving. Symbol "+" means an increase in rating or a pass rating corresponds to more giving, whereas symbol "-" means a decrease in rating or a fail rating corresponds to less giving. "0" means the effect is statistically insignificant. Similarly, the "Decrease (Fail)" column contains the qualitative effect of a decrease in rating or a fail rating on charitable giving. Symbol "+" means that a decrease in rating or a fail rating corresponds to more giving, whereas symbol "-" means that a decrease in rating or a fail rating corresponds to less giving. "0" means the effect is statistically insignificant.

[13] Many argue that charity watchdogs emerged in response to the problem of information asymmetry (Cnaan et al, 2011). Information asymmetry occurs when one party (i.e. charity) possesses more information than another (i.e. donors). Donors, however, require this information to inform their donation decisions. Charity watchdogs thus emerged to allay this information asymmetry.

If donors face the price-cost trade-off, column "Increase (Pass)" should contain symbol "+", as it means that donors use agencies to identify and give to charities with a lower price of giving, and column "Decrease (Fail)" should contain symbol "-", as it means that donors use agencies to identify and avoid giving to charities with a higher price of giving.

TABLE 4: EFFECT OF AGENCIES ON DONATIONS

Source	**Country**	**Date of Rating**	**Watchdog**	**Increase (Pass)**	**Decrease (Fail)**
Berman & Davidson (2003)*	Australia	1996	Accountability parameter (created by authors	0	0
Silvergleid (2003)	US	1997-00	AIP Quarterly ratings	0	0
	Minnesota	1997-00	Minnesota Charities Review Council	+	-
Sloan (2008)	New York	1999-00	BBB Wise Giving Alliance	+	0
Chhaochharia & Ghosh (2008)**	US	1999-04	AIP Quarterly Ratings	+	-
Chen (2009)	New York, Mid-Hudson, Long Island	2005-06	BBB Wise Giving Alliance	+	-
Gordon et al (2009)	US	2007	Charity Navigator	+	-
Grant (2010)	US	2002-09	Charity Navigator	+	-
Szper & Prakash (2011)	Washington State	2004-07	Charity Navigator	0	0

Statistical significance is at the 10 percent level.

* Does not measure the effect of a ratings agency on donations. Rather, the authors created an accountability measure to quantify how accountable the charity is. One can assume that high accountability corresponds to greater ease in obtaining efficiency-related information about the charity.

** Measures how donations change when a charity has the highest rating versus when it has the lowest rating.

The studies reviewed in Table 4 generally find that donors use agencies to inform their giving decisions; however roughly a third of the studies show that highly rated and/or accredited

charities are not rewarded with more donations (e.g. Berman & Davidson, 2003; Silvergleid, 2003; Sloan, 2008; Szper & Prakash, 2011).

The theoretical predictions can explain the results from Berman & Davidson's (2003), Silvergleid's (2003), Sloan's (2008) studies. The financial details of many charities Berman & Davidson (2003) studied were not publicly available at the time of the analysis, which implies that the cost associated with information acquisition was high. Namely, the accountability rating would not affect donations if the cost of searching exceeded the benefit from giving to charities with a lower price of giving. Silvergleid (2003) finds that the AIP quarterly ratings had an insignificant effect on donations. Since AIP rates charities on a scale of A+, A, A-, …, F, the "decrease" in rating from A to A- might not be steep enough to induce donors to search for charities with a lower price of giving. Lastly, Sloan (2008) conjectures that "did-not-pass" ratings did not lead to lower donations, as charities that did not pass are not obligated to reveal it on their websites. Donors would therefore have to search the Wise Giving Alliance database themselves to determine whether or not the charity passed. For those donors, the extra cost of searching might have exceeded the benefits from giving to a charity with a low price.

> *Observation 6:* Based on the evidence, it appears that highly rated or accredited charities receive more donations than lower rated or unaccredited charities, which supports the conjecture that donors face a price-cost trade off.

In spite of this, Cnaan et al (2011) notes that watchdog agencies are not widely used. Using the responses from three waves of the Harris Poll Online Panel (HPOL), they find that most donors (77.7 percent) do not use watchdog ratings; however those engaged in advocacy or systematically make large donations do. The authors consequently question the relevance of watchdog agencies to the average donor, and argue that they are either unaware of watchdog agencies, or do not care about the quality of charities, which seems to contradict the findings in Bekkers (2003, 2010). However the theoretical framework presented in this paper shows that this behaviour does not necessarily mean the donor does not care about the price of giving. Rather, it may indicate that there are easier ways to approximate the quality of charities, such as using signals, rules of thumb, or responding to announcement strategies.

Another issue is whether watchdog agencies can evaluate charities effectively. Ling & Neely (2012) affirm that Charity Navigator can identify top-performing charities in the human-related sector - the only sector they studied. They find that charities that receive a four-star rating from Charity Navigator hold lower levels of excess cash and compensation expenses

and that their compensation is less sensitive to performance. The authors thus conclude that four-star rated charities are "financially less vulnerable" than charities with lower grades. In spite of this, Charity Navigator, awarded Central Asia Institute (CAI) a four star rating (Bernholtz, 2011), and maintained the rating even when allegations that Greg Mortenson, who is the ex-CEO of CAI, mismanaged donors' funds was exposed on 60 minutes (Kristof, 2011). Hence, the efficacy of such watchdog agencies ought not to be taken for granted.

Though the efficacy of watchdog agencies remains unclear, there is evidence that suggests that even knowing about accreditation seals can garner greater trust in, and giving to, the not-for-profit sector. Using the first two waves of the Giving in the Netherlands Panel Survey (2002-2004), Bekkers (2006; see also Bekkers 2003, 2010) shows that awareness of the accreditation system is positively related to confidence in the not-for-profit sector, as it signals that a larger portion of donations is spent on programs. Indeed they found that those with no/little confidence in charities gave 130 Euros per year, those with some confidence gave 257 Euros per year, and those with quite some/very much confidence donated 393 Euros per year.

3.2.4 Do higher fundraising expenses correspond to more giving?

If donors dislike searching for the price of giving, higher fundraising and/or advertising costs should lead to greater giving, as it raises the profile of the organisation and decreases the cost of searching. In particular, fundraising provides information to donors about the charity's operations that is otherwise costly to to obtain. The donor who is afflicted with the price-cost trade-off will thus, all things equal, give more to charities with higher fundraising and/or advertising costs. There are therefore two counterveiling effects of fundraising expenses. On the one hand, high fundraising expenditure should decrease the level of giving of a price-sensitive donor, because it raises the price of giving. On the other hand, it should increase the level of giving of a donor who is afflicted with the price-effort trade-off, because it decreases the cost of effort.

The astute reader would note that the hypothesized positive relationship between fundraising expense and donations implies that not-for-profits would enter a rat-race, where they would successively spend more on fundraising and/or advertising to receive more donations. However if there is a point where the marginal dollar spent on fundraising expense is less than the resultant marginal donation, then engaging in the rat-race would no longer be profitable. And even if the marginal dollar spent on fundraising expense was never less than the resultant marginal donation, recall that donors are heterogeneous. Not all donors are

afflicted with the price-effort trade-off, and so not all donors would give more to a not-for-profits who better advertises itself.

Column "Fundraising" in Table 3 from Section 3.2.2 contains the qualitative effect of charities' fundraising expense in the previous year on donations. Symbol "+" means fundraising expense and donations are positively correlated, and implies that donors give more to charities with higher fundraising expenses. Likewise, "-" means fundraising expense and donations are negatively correlated. "0" means fundraising expense has a statistically insignificant effect on donations, and "N/A" means it was excluded from the study. If donors face the price-cost trade-off, "+" should be observed across the Fundraising column, but if donors are also price-sensitive, "-" should be observed across the PRICE column. Such a result would imply that donors use fundraising and advertisements as a way to glean more information on not-for-profits, but would also imply that donors are price sensitive – they reduce their giving as the price of giving increases.

17 of the 23 studies reviewed in Section 3.1.2 provide evidence in favour of the price-cost trade-off. In line with Okten and Weisbrod's (2000) evaluation, not-for-profits fundraising expenses have two countervailing effects on donations. The direct effect of advertising and fundraising expense increases donations, while the indirect effect via the price of giving decreases donations.

> *Observation 7:* Most studies found that charities that spent more on fundraising expenses in the previous year received greater donations in the current year. However these studies also show that charities that have a greater price of giving receive less private donations. The results thus highlight the countervailing effects of fundraising expense on giving.

4. CONCLUDING REMARKS

We have set out to understand how donors decide which charity to give to, and whether and how donors use the price of giving to guide their giving decisions. To this end, we proposed a theoretical model to explain the conditions in which taste, price, and effort informs giving decisions.

The central insight from the model is that giving decisions might be informed by a price-cost trade-off, where donors care about the price of giving, but are averse to searching for price

because they dislike exerting effort. An implication of the model is that donors seek ways to minimise the amount of effort required to acquire information on charities. Simultaneously, charities that spend more money on fundraising and advertising costs might generate more donations than those that do not, as they are able to raise their profile and thus reduce the donor's search for information. In light of these conjectures, there is a strong case for certification or watchdog agencies. These agencies essentially guarantee that the charity with, say, a seal of approval, spends an appropriate amount on expenses that do not contribute to producing charitable output, whilst reducing the cost of searching for this information. Additionally, due to the public good nature of information, a central watchdog agency that provides information on all charities' price of giving would be more cost effective than individual charities revealing their price of giving metric individually, or publicising themselves through costly fundraising and/or advertising.

We reviewed the literature to test the explanatory power of the theoretical framework. The review was motivated by the questions: do donors care about the price of giving, and do donors seek ways to minimise the cost of information acquisition? The evidence generally provides affirmative answers to the two questions. Hence, the literature supports the hypothesis that the price-cost trade-off informs donors' giving decisions.

We argue, based on theory and the literature, that the previous emphasis on the role of "taste" and/or "price of giving" in informing giving decisions might be overstated, and recommend policy-makers to consider the role of "effort" in donor's giving decision-making process. For if donors do indeed face a price-cost trade-off, measures that can reduce the cost of effort associated with information acquisition, such as investing in certification and/or watchdog agencies, can encourage "smarter " giving. For this to work, these portals need to be widely publicized and trusted by the community. If successful, the information asymmetry problem afflicting the not-for-profit sector can be allayed, and the charity market will move towards a more competitive model where donations flow to charities with a lower price of giving.

5. REFERENCES

Aguiar, F., Branas-Garza, P., & Miller, L. M. (2008). Moral distance in dictator games. *Judgment and Decision Making , 3* (4), 344-354.

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

Andreoni, J. (1998). Toward a Theory of Charitable Fund-Raising. *Journal of Political Economy , 106* (6), 1186 - 1213.

Arumi, A. M., Wooden, R., Johnson, J., Farkas, S., Duffett, A., & Ott, A. (2005). *The Charitable Impulse. Those who give to charities - and those who run them - talk about what's needed to keep the public's trust.* ??: Public Agenda.

Bagwell, S., de Las Casas, L., van Poortvliet, M., & Abercrombie, R. (2013). Money for Good UK. Understanding donor motivation and behaviour. New Philanthropy Capital. London.

Barclays Wealth. (2010). *Barriers to Giving. A white paper in co-operation with Ledbury Research.* England: Barclays Weath.

Bekkers, R. (2003). Trust, Accreditation, and Philanthropy in the Netherlands. *Nonprofit and Voluntary Sector Quarterly , 32* (4), 596-615.

Bekkers, R. (2006). *Keeping the Faith: Origins of Confidence in Charitable Organizations and its Consequences for Philanthropy.* NCVO/VSSN Researching the Voluntary Sector Conference, Warwick University, UK.

Bekkers, R. (2007). Measuring Altruistic Behavior in Surveys: The All-or-Nothing Dictator Game. *Survey Research Methods , 1* (3), 139-144.

Bekkers, R. (2010). 'The Benefits of Accreditation for Fundraising Nonprofit Organizations in the Netherlands'. Pp. 253–279 in: *Nonprofit Clubs: Voluntary Regulation of Nonprofit and Nongovernmental Organizations*, edited by M.K. Gugerty and A. Prakash. Cambridge: Cambridge University Press.

Bekkers, R., & Brutzen, O. (2007). Just keep it simple: a field experiment on fundraising letters. *International Journal of Nonprofit and Volunary Sector Marketing , 12* (4), 371-378.

Bekkers, R., & Wiepking, P. (2011). A Literature Review of Empirical Studies of Philanthropy: Eight Mechanisms that Drive Charitable Giving. *Nonprofit and Voluntary Sector Quarterly , 40* (5), 924-973.

Bennett, R., & Gabriel, H. (2003). Image and Reputational Characteristics of UK Charitable Organizations: An Empirical Study. *Corporate Reputation Review , 6* (3), 276-289.

Berman, G., & Davidson, S. (2003). Do Donors Care? Some Australian Evidence. *Voluntas: International Journal of Voluntary and Nonprofit Organizations , 14* (4), 421-429.

Bernholz, L. (2011, 4 18). *Tea, lives, and trust*. Retrieved May 30, 2012, from Philanthropy 2173 The Future of Good: http://philanthropy.blogspot.com.au/2011/04/tea-lives-and-trust.html

Blackbaud. (2009). *2009 State of the Not-for-Profit Industry Survey. United Kingdom Survey Results.* In association with the Resource Alliance.

Borgloh, S., Dannenberg, A., & Aretz, B. (2013). Small is Beautiful - Experimental Evidence of Donors' Preferences for Charities. *Economics Letters 120* , 242-244,

Borgloh, S., Dannenberg, A., & Aretz, B. (2010). Small is Beautiful - Experimental Evidence of Donors' Preferences for Charities. ZEW - Centre for European Economic Research Discussion Paper No. 10-052. Available at SSRN: http://ssrn.com/abstract=1663639 or http://dx.doi.org/10.2139/ssrn.1663639

Bowman, W. (2006). Should Donors Care about Overhead Costs? Do they Care? *Nonprofit and Voluntary Sector Quarterly , 35* (2), 288-310.

Branas-Garza, P. (2006). Poverty in dictator games: Awakening solidarity. *Journal of Economic Behavior & Organization , 60*, 306-320.

Breeze, B. (2010). *How donors choose charities.* . University of Kent, Centre for Charitable Giving and Philanthropy. London: Alliance Publishing Trust.

Buchheit, S., & Parsons, L. M. (2006). An experimental investigation of accounting information's influence on the individual giving process. *Journal of Accounting and Public Policy , 25*, 666-686.

Callen, J. (1994). Money donations, volunteering and organizational efficiency. *Journal of Productivity Analysis , 67* (3), 215-228.

Chen, G. (2009). Does Meeting Standards Affect Charitable Giving? An Empirical Study of New York Metropolitan Area Charities. *Nonprofit Management and Leadership , 19* (3), 349-365.

Chhaochharia, V., & Ghosh, S. (2008). Do Charity Ratings Matter? *No 08001, Working Papers, Department of Economics, College of Business, Florida Atlantic University* .

Church, B.K. and L.M. Parsons. (2008). Performance information and charitable giving: Experimental evidence. Working paper at Georgia Tech and the University of Alabama.

Cnaan, R. A., Jones, K., Dickin, A., & Salomon, M. (2011). Nonprofit watchdogs: Do they serve the average donor? *Nonprofit Management and Leadership , 21* (4), 381-397.

Department of Families, Community Services and Indigenous Affairs. (2006). *Giving Australia: Research on Philanthropy in Australia. Report on Qualitative Research.* Canberra.

Department of Family and Community Services. (2005). *Giving Australia: Research on Philanthropy in Australia.* Canberra.

Duncan, B. (2004). A theory of impact philanthropy. *Journal of Public Economics, 88*(9), 2159-2180

Flack, T. (2004). *The Mandatory Disclosure of Cost of Fundraising Ratios: Does it achieve the regulators' purposes?* Centre of Philanthropy and Nonprofit Studies Queensland University of Technology. Brisbane: Working Paper No. CPNS26.

Forbes, D.P. (1998), Measuring the Unmeasurable: Empirical Studies of Nonprofit Organization Effectiveness from 1977 to 1997. Nonprofit and Voluntary Sector Quarterly , 183 – 202.

Frumkin, P., & Kim, M. T. (2001). Strategic Positioning and the Financing of Nonprofit Organizations: Is Efficiency Rewarded in the Contributions Marketplace? *Public Administration Review , 61* (3), 266-275.

Gigerenzer & Todd (1999). Simple Heuristics That Make Us Smart. Oxford University Press.

Glazer, A., & Konrad, K. (1996). A signaling explanation for private charity. *American Economics Review , 86* (4), 1019-1028.

Gordon, T. P., Knock, C. L., & Neely, D. G. (2009). The Roel of Rating Agencies in the Market for Charitable Contributions: An Empirical Test. *Journal of Accounting and Public Policy , 28* (6), 469-484.

Grant, L. G. (2010, December 10). The Response to Third-Party Ratings: Evidence of the Effects on Charitable Contributions. *Working Paper* .

Greenlee, J., & Brown, K. (1999). The Impact of Accounting Information on Contributions to Charitable Organizations. *Research in Accounting Regulation , 13*, 111-125.

Harbaugh, W. T., Myer, U., & Burghart, D. R. (2007). Neural responses to taxation and voluntary giving reveal motives for charitiable donations. *Science , 316*, 1622-1625.

Herman, R.D., & Renz, D.O. (1999). Theses on Nonprofit Organizational Effectiveness. *Nonprofit and Voluntary Sector Quarterly, 28*, 107-126.

Hope Consulting (2010). Money for good: The US market for impact investments and charitable gifts from individual donors and investors. Accessed 9 June 2013. <http://www.hopeconsulting.us/pdf/Money%20for%20Good_Final.pdf>

Jacobs, F. A., & Marudas, N. P. (2009). The Combined Effect of Donation Price and Administrative Inefficiency on Donations to US Nonprofit Organizations. *Financial Accountability & Management , 25* (1), 33-53.

Jones, C. L., & Roberts, A. A. (2006). Management of Financial Information in Charitable Organizations: The Case of Joint-Cost Allocations. *American Accounting Association , 81* (1), 159-178.

Karlan, D., & List, J. A. (2007). Does Price Matter in Charitable Giving? Evidence from a Large-Scale Natural Field Experiment. *American Economic Review , 97* (5), 1774-1793.

Karlan, D., List, J. A., & Shafir, E. (2011). Small matches and charitable giving: Evidence from a natural field experiment. *Journal of Public Economics , 95*, 344-350.

Keating, E. K., Parsons, L. M., & Roberts, A. A. (2008). Misreporting Fundraising: How do Nonprofit Organizations Account for Telemarketing Campaigns? *Accounting Review , 83* (2), 417-446.

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

Khanna, J., Posnett, J., & Sandler, T. (1995). Charity donations in the UK: New evidence based on panel data. *Journal of Public Economics , 56* (2), 257-272.

Khumawala, S. B., & Gordon, T. P. (1997). Bridging the Credibility of GAAP: Individual Donors and the New Accounting Standards for Nonprofit Organizations. *Accounting Horizon , 11* (3), 45-68.

Krishnan, R., Yetman, M., & Yetman, R. J. (2006). Expense Misreporting in Nonprofit Organizations. *Accounting Review , 81* (2), 399-420.

Kristof, N. D. (2011, April 11). *'Three Cups of Tea,' Spilled.* Retrieved May 30, 2012, from The New York Times: http://www.nytimes.com/2011/04/21/opinion/21kristof.html

Landry, C. E., Lange, A., List, J. A., Price, M. K., & Rupp, N. G. (2010). Is a Donor in Hand Better than Two in the Bush? Evidence from a Natural Field Experiment. *American Economic Review , 100* (3), 958-983.

Lasby, D. (2004). *The Philanthropic Spirit in Canada: Motivations and Barriers.* Canadian Centre for Philanthropy, Toronto.

Leibenstein, H, (1966). Allocative Efficiency vs. X-Efficiency, *American Economic Review , 56 (3),* 392–415

Leibenstein, H., & Maital (1993). Organizational Foundations of X-Inefficiency, *Journal of Economic Behavior and Organization , 22,* 251- 268.

Li, W., McDowell, E., & Hu, W. (2012). Effects of Financial Efficiency and Choice to Restrict Contributions on Individual Donations. *Accounting Horizons:* Match 2012, *26* (1), 111-123

Ling, Q., & Neely, D. G. (2012). Implications of Being a Highly Rated Organization: Evidence from Four-Star Rated Nonprofits. *Accounting and Finance Research , 1* (1), 3-17.

List, J. A., & Lucking-Reiley, D. (2002). The effects of seed money and refunds on charitable giving: experimental evidence from a University capital campaign. *Journal of Political Economy , 110*, 215-233.

Madden, K. (2006). Giving and Identity: why affluent Australians give - or don't - to community causes. *Australian Journal of Social Issues* .

Marcuello, C., & Salas, V. (2001). Nonprofit Organizations, Monopolistic Competition, and Private Donations: Evidence from Spain. *Public Finance Review , 29* (3), 183-207.

Marudas, N. P. (2004). Effects of Nonprofit Organization Wealth and Efficiency on Private Donations to Large Nonprofit Organizations. *Research in Government and Nonprofit Accounting , 11*, 71-91.

Marudas, N. P., & Jacobs, F. A. (2004). Determinants of Charitable Donations to Large U.S. Higher Education, Hospital, and Scientific Research NPOs: New Evidence from panel Data. *Voluntas: International Journal of Voluntary and Nonprofit Organizations , 15* (2), 157-179.

Marudas, N. P., & Jacobs, F. A. (2007). The extent of excessive or insufficient fundraising among US arts organizations and the effect of organizational efficiency on donations to US arts organizations. *International Journal of Nonprofit & Voluntary Sector Marketing , 12* (3), 267-273.

Marudas, N. P., & Jacosb, F. A. (2008). The effect of organizational inefficiency on donations to U.S. nonprofit organizations and the sensitivity of results to different specifications of organizational size. *Proceedings of ASBBS , 15* (1), 318-326.

McDowell, E., Li, W., & Smith, P. C. (2010). Investigating individual donor information search: The relevance of nonprofit efficiency and nonfinancial information. American Accounting Association - Auditing Section - Annual Meeting.

McDowell, E. & Li, W. (2008). The Influence of Financial Efficiency and Affect on Individual Donors' Donation Decisions. American Accounting Association Annual Meeting.

Okten, C., & Weisbrod, B. A. (2000). Determinants of donations in private nonprofit markets. *Journal of Public Economics , 75*, 255-272.

Ortmann, A. (1996). Modern economic theory and the study of nonprofit organizations: Why the Twain shall meet. *Nonprofit and Voluntary Sector Quarterly , 25*, 470-484.

Ortmann, A., & Schlesinger, M. (2003). Trust, repute, and the role of nonprofit enterprise. In H. Anheier, & A. Ben-Ner, *The study of nonprofit enterprise: Theories and approaches* (pp. 77-114). Ann Arbor, MI: University of Michigan Press.

Ortmann, A., & Svitkova, K. (2007). Certification as a Viable Quality Assurance Mechanism in Transition Economies: Evidence, Theory, and Open Questions. *16.2 (99-114)* . Prague Economic Papers.

Parsons, L. M. (2003). Is accounting information from nonprofit organizations useful to donors? A review of charitable giving and value-relevance. *Journal of Accounting Literature , 22*, 104-129.

Posnett, J., & Sandler, T. (1989). Demand for Charity Donations in Private Non-Profit Markets. The Case of the U.K. *Journal of Public Economics , 40*, 187-200.

Productivity Commission. (2010). *Contribution of the Not-for-Profit Sector.* Canberra.

Rondeau, D., & List, J. A. (2008). Matching and challenge gifts to charity: evidence from laboratory and natural field experiments. *Experimental Economics , 11*, 253-267.

Salop, S.C., & Stiglitz, J.E. (1979). Bargains and Ripoffs: A Model of Monopolistically Competitive Price Dispersion. *Review of Economic Studies , 44*, 493-510.

Sargeant, A. (1999) Charitable giving: Towards a model of donor behaviour. *Journal of Marketing Management*, 15 (4). pp. 215-238

Sargeant, A. and Ford, J.B. (2006) 'The Power of Brands', Stanford Social Innovation Review, Winter, 41-47

Sargeant A and Jay E (2010) Fundraising Management, Analysis Planning and Practice, 2nd edition, Routledge, London

Saxton, G. D., Neely, D., & Chao, G. (2011, August 19). Web Disclosure and the Market for Charitable Contributions. Available at SSRN: http://ssrn.com/abstract=1912966.

Sen, A. (1977). Rational Fools: A Critique of the Behavioural Foundations of Economic Theory. *Philosophy and Public Affairs , 6*, 317-344.

Silvergleid, J. E. (2003). Effects of watchdog organizations on the social capital market. *New Directions for Philanthropic Fundraising , 41*, 7-26.

Sloan, M. (2009). The Effects of Nonprofit Accountability Ratings on Donor Behavior. *Nonprofit and Voluntary Sector Quarterly , 38* (2), 220-236.

Stigler, G.J. (1976). The Xistence of X-Efficiency, *American Economic Review* , 66(1), 213-216.

Szper, R., & Prakash, A. (2011). Charity Watchdogs and the Limits of Information-Based Regulation. *Voluntas , 22*, 112-141.

The Center on Philanthropy at Indiana University. (2009). *The 2008 Study of High Net Worth Philanthropy. Issues Driving Charitable Activities among Affluent Households.*

Tinkelman, D. (1998). Differences in Sensitivity of Financial Statement Users to Joint Cost Allocations: The Case of Nonprofit Organizations. *Journal of Accounting, Auditing & Finance , 13* (4), 377-393.

Tinkelman, D. (1999). Factors affecting the relation between donations to not-for-profit organizations and an efficiency ratio. *Research in Government and Nonprofit Accounting , 10*, 135-161.

Tinkelman, D. (2004). Using nonprofit organizational-level financial data to infer managers' fund-raising strategies. *Journal of Public Economics , 88* (9/10), 2181-2192.

Tinkelman, D., & Mankaney, K. (2007). When is Administrative Efficiency Associated with Charitable Donations? *Nonprofit and Voluntary Sector Quarterly , 36* (1), 41-64.

Trussel, J. M., & Parsons, L. M. (2008). Financial Reporting Factors Affecting Donations to Charitable Organizations. *Advances in Accounting , 23*, 263-285.

Varian, H. R. (1980). A Model of Sales. *The American Economic Review , 70(4)*, 651-659.

Varian, H. R. (2006). *Intermediate Microeconomics - A Modern Approach (Seventh Edition).* New York: W. W. Norton & Company.

Vesterlund, L. (2003). The information value of sequential fundraising. *Journal of Public Economics , 87*, 627-657.

Vesterlund, L. (2006) "Why do People Give?" in Richard Steinberg and Walter W. Powell eds., The Nonprofit Sector, 2nd edition, Yale Press, 2006.

Weisbrod, B. A., & Dominguez, N. D. (1986). Demand for collective goods in private nonprofit markets: Can fundraising expenditures help overcome free-rider behavior? *Journal of Public Economics , 30* (1), 83-96.

Yetman, M. H. (2009). Economic Consequences of Expense Misreporting in Nonprofit Organizations: Are Donors Fooled? *Working Paper* .

Yetman, M., & Yetman, R. (2011). Do Donors Discount Misleading Accounting Information? *UC David Graduate School of Management Research Paper No. 04-09* .