

The Association Between Fundraising Efficiency, Financial Vulnerability, And Subsequent Donations To Not-For-Profits

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ABSTRACT

In this paper, we empirically study the association between past year fundraising efficiency and current year donations to not-for-profit organizations. First, our data show that prior year fundraising inefficiency (fundraising expenses as a proportion of total donations) is negatively associated with current year donations and is robust to an inclusion of prior year financial vulnerability as an explanatory variable. Secondly, we find that prior year levels of fundraising expenses and program expenses are positively associated with current year donations. Finally, prior-year financial vulnerability, which is measured in our paper consistent with Greenlee and Trussel (2000), is negatively associated with current year donations.

Keywords: Fundraising Efficiency; Financial Vulnerability; Donations to Not-For-Profits

1. INTRODUCTION

Understanding what makes a successful charity involves first understanding why Not-For-Profits (NFPs) are important. A NFP is an organization which undertakes social welfare initiatives, “a cause,” where there is no profit motive that would engage the business sector (Gordon et al., 1999). NFPs received approximately \$290.89 billion in charitable contributions in 2010 (<http://www.nptrends.com/nonprofit-trends/giving-usa-2011-report.htm>), up from \$212 billion in charitable donations in 2001 (Parsons 2003). While the Wall Street Journal (2012) reports that charitable contributions in 2010 were down from a high of \$311 billion in 2007, the importance of the NFP sector is likely to increase with health care costs and delivery emerging as major economic issues. Despite the size and importance of this sector, there is limited research examining the relationship between accounting information and donations to NFPs (Parsons, 2003).

Why do donors give to a particular NFP? Unlike for profit shareholders, donors are not the beneficiaries of the NFP and as such, may have less incentive to monitor disposition of the resources of the NFP than investors do (Fama and Jensen, 1983). People contribute to certain charities for various reasons, paramount among them is that they believe in “the cause,” or mission, of a particular charitable sector, and in particular, the individual charity’s ability to carry it out in an efficient and effective manner. Donations serve as a proxy for trust, the trust donors place in a NFP’s managers to meet the stated purpose of the organization and to comply with donor restrictions (Parsons, 2003). Since it is hard to study effectiveness—the degree to which these goals are met—because of a lack of publicly available measures, we focus on a fundraising efficiency measure and its association to donations. Parsons (2003) suggests that a fundraising measure that could be interesting is the efficiency of fundraising, measured as the proportion of fundraising expenses to donations generated. The higher this ratio, the lower is the fundraising efficiency. We agree that this measure, ratio of inputs to outputs, could better capture “efficiency.” The present paper addresses this gap in the NFP research. Our first hypothesis tests for a positive association between fundraising efficiency and subsequent donations. We expect donors to reward NFPs who are efficient with their fundraising expenses.

We then test for the robustness of our results to see if it would hold up in the presence of a measure of financial vulnerability. This is another area that has received very little attention in accounting. Tuckman and Chang (1991) and Greenlee and Trussel (2000) have developed models that predict financial vulnerability in NFPs in periods of declining revenues. Revenue concentration proxies for risk because NFPs who have a single source of revenue (a firm with a ratio of 1) are more financially vulnerable than NFPs which have a more diversified sources of revenue (a firm with a ratio near 0).

The main contribution of our paper is to demonstrate the positive association of prior period fundraising efficiency with current period donations (i.e., the ratio of fundraising expenses to donations in the prior period is negatively associated with current period donations). We find that prior year levels of fundraising expenses and program expenses show a significant positive association with current year donations. We also demonstrate that this relationship is robust to the inclusion of financial vulnerability measures as explanatory variables. Our results show that generally, prior period financial vulnerability has a negative association with current period donations. In particular, donors view investment income and prior donations as more persistent than revenues of dues, program revenues, and sales of unrelated items.

The rest of the paper is organized as follows. We give a brief review of the literature in the next section. We present our model and data in section 3. We discuss our empirical analysis in section 4. Finally, we present our conclusions, and identify possible future research questions in section 5.

2. LITERATURE REVIEW

Accounting standard setters are interested in providing useful information to donors and other users of the financial statements about the efficiency of the NFP. The IRS and FASB do not require financial statements of NFPs to be prepared in accordance with GAAP (Parsons, 2003). The AICPA's Statement of Purpose 87-2 and 98-2 require charities to identify joint costs, costs that are shared by one or more cost categories. Prior to the passage of SOP 87-2, all expenses associated with fundraising appeals were classified as fundraising. SOP 87-2 allowed joint costs shared between fundraising and program expenses to be apportioned between the two categories of expenses, thus raising the program expenses. Neither SOP 87-2 nor SOP 98-2 require nor recommend a specific method of allocation of joint costs; they only provide guidance on how costs should be allocated between programs, fundraising, and administrative (FASB 1993, IRS 2002), requiring that the allocation of joint costs be rational, systematic, and applied consistently. Tishlias (1992) proposed four reasonable joint cost allocation methods: 1) allocate equally; 2) allocate based on activity-based costs; 3) allocate based on percentage of stand-alone costs; and 4) allocate in proportion to the difference between a segment's stand-alone cost and its incremental cost of joining the group. SOP 98-2 seeks to clarify when fundraising costs can be allocated to program expenses, mandating that joint costs must satisfy program, audience and content criteria to be classified as program expenses. Simply telling someone about the cause does not satisfy the program requirement—a call to action is required. The audience must be selected for its need to use the specific action, not because the recipients are likely to contribute. The content must advance the program purpose (Tinkelman, 2009, Jones and Roberts, 2006). Any joint activity which fails to meet all three criteria must allocate all costs of the joint activity to fundraising. Managers still maintain discretion over which costs are joint costs and how these costs will be allocated to programs, fundraising, and administration. Roberts (2005) finds higher program ratios after SOP 87-2 and no significant decrease in joint costs after SOP 98-2. Jones and Roberts (2006) finds that donors ignore the effect of joint cost allocations even though managers of NFPs appear to be using them to manage program ratios. Many NFPs use educational content in their solicitations so they can report joint costs and thus, raise their program ratios. Donors have a strong preference for organizations that provide services and efficiently advertise (fundraise). Subsequently, we expect NFPs which spend more on programs and fundraising will have higher donations. We expect donors to punish NFPs who spend more on administration, resulting in lower donations.

The accounting literature is divided on how to measure efficiency for NFPs. A number of papers have focused on the program ratio, which is the proportion of program expenses to total expenses, a measure of operating efficiency of NFPs (Core et al., 2006, Callen, 1994, Jones and Roberts, 2006, and Jones, 2005). As noted by the National Center for Charitable Statistics (NCCS) on their website (<http://nccsdataweb.urban.org/knowledgebase/index.php?category=40>),

For better or worse, the percentage of total expenses going to program costs is the most common measure of nonprofit organizational efficiency. Focus group research has found that donors expect worthy organizations to have low fundraising and administrative costs. Consequently, nonprofits frequently tout their low overhead ratios in their mailings to the donors.

Callen (1994) document a positive relationship between program spending and charitable donations. Tinkelman (1998) finds large donors are more sensitive to quality and efficiency indicators.

Other studies have defined efficiency of NFPs in terms of fundraising and administrative expenses. Khumawala, Parsons and Gordon (2005) find preparers base donations almost entirely on reported fund-raising costs and accept the validity of the reported program ratios. Baber et al (2002) focus on executive compensation. They report that changes in program expenditures show a positive relationship to changes in executive compensation. Frumkin and Kim (2001) focus on “efficiency” as a ratio of administrative expenses to total expenses. They find that charities with low levels of this ratio did not fare better than those with high levels. However, they note that the fundraising expenses showed a positive relationship with donations. This finding leads Frumkin and Kim (2001, p. 271) to note that “non-profit organizations that spend more marketing themselves to the donating public do better at raising contributed income than organizations focused upon leaner, more efficient operations.” Krishnan, Yetman, and Yetman (2006) document evidence that there is underreporting of fundraising expenses by NFPs. They further identify managerial incentives associated with underreporting of fundraising expenses. We add to the literature by measuring the efficiency of fundraising using a measure first suggested by Parsons (2003), fundraising expense to total donations. Our results show that donors reward efficiency in fundraising, even when we control for prior donations and current expenditures in programs, administration and fundraising.

Finally, we add to the literature by demonstrating that this relationship is robust to the inclusion of financial vulnerability. Tuckman and Chang (1991) develop a model to measure a firm’s financial vulnerability, a measure of going concern, in periods of declining donations using measures of potential surplus, revenue concentration and cost flexibility as related to administrative costs and operating costs. Greenlee and Trussel (2000), using the Tuckman and Chang model, develop a logit to predict the likelihood of a firm being severely financially vulnerable. They evaluate a firm’s financial vulnerability in terms of its revenues sources (total donations, investment income, program service, denotes dues, and sales of unrelated goods). A firm that has a single source of revenue (a firm with a ratio of 1) is more vulnerable than a more diversified firm (a firm with a ratio close to zero). While we find revenue concentration in the aggregate to be statistically insignificant, we find that donors view prior donations and investment income as persistent and therefore, they have a positive relationship with donations. On the other hand, we find that donors view program services revenues, dues and the sales of unrelated goods have a negative relationship to donations, suggesting that donors view these sources of revenue as less important (persistent). Firms concentrating their sources of revenues in these areas are less likely to attract future donations. We are the first to disaggregate the effect of the different sources of revenues and to evaluate how concentrating revenues in the different areas effect future donations.

3. DATA AND MODEL

We use the NCCS-GuideStar National Nonprofit Research Database which includes information from Form 990 or 990-EZ for all 501(c)(3) public charities that filed from 1998-2003. We obtain 1,388,480 observations. Although the Form 990 and 990-EZ is an adequate and fairly reliable source of financial information for NFPs, the form is not audited and errors may exist (Froelich and Knoepfle 1996; Froelich et al 2000, Roberts, 2005). We eliminate 28,605 observations due to reporting errors on Form 990. Since we are studying the effects of various factors on donations we then eliminate all firms with total contributions equal to zero, 244,745 observations, as well as all firms with no private donations, 50,881 observations. We then require firms to have at least 3 years of data in order to generate sufficient lagged data for our model. Finally, this gives us 186,977 observations for model (1) and 164,263 observations for model (2). All continuous non-ratio variables are winsorized at the 1% level.

Table 1: Data and Sample Selection

Population of Charities in 1998-2003	1,388,480
Charities eliminated due to reporting errors	(28,605)
	<u>1,359,875</u>
Charities that do not have any total contributions	(244,745)
Charities that do not have any private contributions	(50,881)
	<u>1,064,249</u>
Charities lacking sufficient data	(662,115)
	<u>402,134</u>
Charities lacking sufficient lags	(215,157)
	<u>186,977</u>

Our empirical model is:

$$\text{Donations}_t = \beta_0 + \beta_1 \text{Donations}_{t-1} + \beta_2 \text{Program_Exp}_{t-1} + \beta_3 \text{Admin_Exp}_{t-1} + \beta_4 \text{FundRaising_Exp}_{t-1} + \beta_5 \text{Eff_of_FR}_{t-1} + \varepsilon_t \tag{1}$$

where the variables are defined below:

Donations _t	Natural log of total donations less grants in current year t
Program_Exp _{t-1}	Natural log of program expenses in previous year t – 1
Admin_Exp _{t-1}	Natural log of administrative expenses in previous year t – 1
FundRaising_Exp _{t-1}	Natural log of fundraising expenses in previous year t – 1
Eff_of_FR _{t-1}	Previous year’s fundraising expenses divided by total donations in previous year t – 1

In our second model, we examine the robustness of our results by controlling for the effect of risk in terms of financial vulnerability in NFPs.

$$\text{Donations}_t = \beta_0 + \beta_1 \text{Donations}_{t-1} + \beta_2 \text{Program_Exp}_{t-1} + \beta_3 \text{Admin_Exp}_{t-1} + \beta_4 \text{LnFundRaising_Exp}_{t-1} + \beta_5 \text{Eff_of_FR}_{t-1} + \sum_i \beta_{6i} (\text{Revenue Source}_i / \text{Total Revenue})^2 + \varepsilon_t \tag{2}$$

where

- i=1 denotes total donations,
- i=2 denotes investment income,
- i= 3 denotes program service,
- i=4 denotes dues, and
- i=5 denotes sales of unrelated goods

4. EMPIRICAL ANALYSIS

Descriptive Statistics

Table 2 displays descriptive information for the samples NFPs. Consistent with prior research, of the three categories of expenses, Program_Exp has the highest mean at 12.758, with the means of administrative and fundraising expenses being 10.816 and 9.640 respectively.

The efficiency of fundraising ranges from 0 to 53% (i.e. a NFP which spends 53¢ in fundraising costs to raise \$1 of donations) with a mean of 5.9%. This ratio as suggested by Parsons (2003) addresses the cost of generating donations instead of the efficiency of operations (FR_Ratio). It models the effect of efficient fundraising. We test the robustness of our results by controlling for financial vulnerability (Rev_Con). NFPs are financially vulnerable when they have a single source of revenue or most of their revenue is concentrated in one area. A NFP

which has a high concentration of revenue will have a ratio of Rev_Con close to 1. A lower Rev_Con denotes a firm with diversified sources of revenue and little financial vulnerability should a single source of revenue begin to decline. For the firms in our study, Rev_Con ranges from .003 to 1 (a firm with a single source of revenue), with the mean being 0.553. The data suggests that decisions that affect total costs and how efficient a NFP is at fundraising can have a non-trivial effect on donations.

Table 2: Descriptive Statistics

N = 186,977				
Variables	Mean	S.E.	Minimum	Maximum
Donations _t	11.655	2.721	0	16.277
Program_Exp	12.758	1.711	8.705	17.412
Admin_Exp	10.816	2.168	0	15.321
FundRaising_Exp	9.640	1.980	4.543	14.155
Eff_of_FR	0.059	0.086	0	0.530

Results

The results of the pooled regressions are presented in Table 3. Using Model (1), we examine the association between current period donations and prior period fundraising efficiency. The results demonstrate a negative association between the ratio of fundraising expenses to donations in the prior year and donations in the current year. If firms are inefficient at fundraising, donations will decrease. Further, we see a negative association between prior period administrative expenses and current period donations—donors prefer NFPs which have lower administrative expenses. Finally, we also notice that prior period fundraising and program expenditures are positively associated with current period donations—donors reward firms who advertise (fundraise) and who spend more on programs.

Table 3: Regression Results for Model 1

Dependent variable – Donations _t		
Variables	β	S.E.
Constant	0.374***	0.027
Donations _{t-1}	0.777***	0.001
Program_Exp _{t-1}	0.118***	0.003
Admin_Exp _{t-1}	-0.028***	0.002
FundRaising_Exp _{t-1}	0.115***	0.003
Eff_of_FR _{t-1}	-0.662***	0.046
Number of observations	186,977	
Adjusted R ²	0.7332	

Notes: *** coefficient significant at 1 percent **coefficient is significant at 5 percent *coefficient is significant at 10 percent

Next, as we examine the results of Model (2) in Table 4, we see that the association between prior period fundraising efficiency and current period donations is robust even when controlling for the risk associated with concentration in revenue sources. The evidence suggests that the concentration of revenue of NFPs in dues, program revenues, and sales of unrelated items, are associated negatively with subsequent donations. On the other hand, a concentration of revenues in investment revenues and/or donations exhibits a positive association with subsequent donations. This result is consistent with donors viewing a concentration of revenue in investment income and donations as more persistent (important) than revenue concentration consisting of dues, program revenues and sales of unrelated items. The evidence suggests that, generally, prior-year financial vulnerability is negatively associated with current year donations.

Table 4: Regression Results for Model 2

Dependent variable – Donations _t Variables	β	S.E.
Constant	-0.062**	0.029
Donations _{t-1}	0.774***	0.002
Program_Exp _{t-1}	0.155***	0.004
Admin_Exp _{t-1}	-0.002	0.003
FundRaising_Exp _{t-1}	0.084***	0.003
Eff_of_FR _{t-1}	-0.284***	0.046
Dues_Con	-1.455***	0.099
Sales_Con _{t-1}	-0.532***	0.028
ProgRev_Con _{t-1}	-0.448***	0.028
Invest_Con _{t-1}	2.403***	0.217
Donations_Con _{t-1}	0.212***	0.012
Number of observations	164,263	
Adjusted R ²	0.7708	

Notes: Dependent Variable is Donations_t; *** coefficient significant at 1 percent **coefficient is significant at 5 percent *coefficient is significant at 10 percent

5. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

We note that the conclusions of our paper are subject to the limitation of the data quality in the NCCS database. The data available through the NCCS is unaudited information taken from the 990's filed with the IRS by NFPs. Because the information is unaudited, it is expected that some errors may be contained in the data. Secondly, our initial foray into the question of financial vulnerability is subject to the limitations of prior work that defined financial vulnerability. A more detailed examination of the impact of financial vulnerability on donations is left for future research.

Among the reasons that people contribute to certain charities is that they believe in “the cause,” or mission of a particular charitable sector, and in the ability of the individual charity to carry it out in an efficient and effective manner the mission. Since it is hard to study effectiveness (the degree to which these goals are met), we empirically study efficiency in terms of fundraising efficiency and its association to donations. Using an efficiency measure suggested by Parsons (2003), the proportion of fundraising expenses to donations generated, we find that prior year fundraising inefficiency is negatively associated with current year donations and is robust to the an inclusion of prior year financial vulnerability. We also find a positive association between current year donations and prior year levels of fundraising and program expenses. Finally, we define financial vulnerability as revenue concentration (Greenlee and Trussel, 2000) and find it is generally negatively associated with current year donations. In conclusion, donors reward NFPs who spend more on programs and fundraising, provide they v are efficient with their fundraising expenses. Donors recognize financial vulnerability in terms of revenue concentration and are cautious in donating to NFPs who are heavily reliant on fewer sources of income.

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NOTES