What Do Nonprofit Organizations Seek? (And Why Should Policymakers Care?)

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Abstract

The objectives of nonprofit managers are not immediately apparent. Indeed, nonprofits may seek to maximize their level of service or their budgets, or they may have undefined or unstable objectives. This paper presents a theoretical model of managerial objectives that yields testable hypotheses, which I test using 2001 data on 190,000 American nonprofits. While there is substantial variation between different types of nonprofits, they generally approach a service maximization objective, but maintain fundraising budgets that are insufficient to meet this objective. These findings have significant implications for policy and nonprofit management. © 2005 by the Association for Public Policy Analysis and Management

INTRODUCTION

What is the objective of nonprofit organizations? Legally, the answer is fairly straightforward in the United States, where the Federal Tax Code defines tax-exempt activity as that dedicated to "religious, charitable, scientific, testing for public safety, literary, or educational purposes, or to foster national or international amateur sports competition . . ."[1] However, this information gives us relatively little insight into what the organizations—or their leaders—actually seek. For example, in producing a charitable or educational service without distributed profit, does the manager of a charity maximize the level of output (say, the number of hungry people fed, or symphony orchestra concerts performed)? Does he or she seek to maximize the quality of the services rendered? Or does the manager want to maximize the organization's share of a particular market? These objectives are all compatible with the tax code's regulations.

This article attempts to uncover nonprofit managerial objectives empirically, using a very large sample of American nonprofit organizations from 2001. Based on

[1] This language refers to 501(c)(3) organizations, which are the most common type of nonprofits, and the subject of the empirical section of this paper. See U.S. Code TITLE 26, Subtitle A, CHAPTER 1, Subchapter F, PART I, Sec. 501(c)(3).

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a structural model of behavior, I identify a range of possible objectives, some of which are evident in the data. These findings have implications about the way nonprofits are governed, and how they might be supported and regulated.

The answer to the question of the objective of nonprofits and their managers is important for public administrators and policymakers. First, under the American system of tax-deductible contributions, approximately 16 cents of each dollar of private charitable giving is lost to the federal government in foregone tax revenues, as well as additional amounts by state and local governments (Brooks, 2004). Second, many nonprofits receive high levels of government funding. Currently, for example, governments at all levels provide about a third of all nonprofit revenues, which amounts to more than $200 billion annually (Independent Sector, 2002). Third, governments are increasingly using the nonprofit sector to produce or deliver public goods and services, resulting in a significant wave of public-private contracting (Van Slyke, 2003). Thus, the use of funds by nonprofits, which is molded by their objectives, impacts the finances of governments, and the well-being of citizens.

BACKGROUND

It is conventional throughout the economics literature—indeed, it is a foundational building block of the theory of the firm—to assume a profit-maximization objective for for-profit companies. While this approach has proven useful in describing and predicting for-profit behavior, it has yielded no especially useful analog in the nonprofit sector. Nonprofits presumably have less exposure to the pressures of free markets, and hence develop organizational objectives that turn less strictly on the financial prosperity of the firm (although, one must assume, this still usually has a role in decisionmaking).

Writing about nonprofit objectives begins with definition of the basic functions of nonprofit organizations. For example, Hall (1987) defines a nonprofit organization as a private group that associates in order to (1) undertake public tasks on behalf of the government, (2) provide public goods and services for which there is demand but no supply from either the public or for-profit sectors, or (3) influence public policy. The first two of these functions motivates what is probably the most common economic explanation for why nonprofits exist: the so-called *subsidy theory* (Hansmann, 1987), which argues that people will tend to donate to organizations that are not motivated by profit, thus creating an incentive for nonprofits to develop in the first place. West (1987) summarizes the theory: "a policy of aiding . . . nonprofit organizations . . . can easily be predicted to encourage their growth." This is compatible with Weisbrod's (1978) well-known work that models charitable giving for the voluntary provision of public goods.

Within this context, scholars have identified several possible objective types for nonprofit organizations. First, they may seek to maximize the amount of core output they provide ("service maximizers"). Second, they might try to maximize the size of their agencies, irrespective of the associated costs ("budget maximizers"). Third, they may maximize something less obviously measurable, such as product quality or some other qualitative element of a nonprofit's mission. Alternatively, nonprofits may actually have no coherent managerial objective at all—a distinct possibility, given the fact that a nonprofit's objective is, notwithstanding the discussion here, not usually a simply conceived phenomenon for most organizations. Rather, objectives result from the beliefs and preferences of a diverse leadership group, including executives, a Board of Directors, and frequently funders and reg-

ulators. When these preferences are incompatible, an apparently unstable objective could result.

In his influential 1986 article, Steinberg formulated a novel method to study empirically the first two possible nonprofit objectives above, in which he tested whether organizations in several subsectors maximized gross revenues, or rather revenues net of fundraising expenditures.[2] He interpreted the latter as evidence of an objective to maximize income to spend on core nonprofit activities (service maximization), and the former as evidence of an objective to maximize the size of the nonprofit's budget, ignoring costs (budget maximization). Using data from four metropolitan areas in the mid-1970s, Steinberg found that health nonprofits tended to be budget maximizers, while those in social welfare, education, and the arts were service maximizers. Steinberg's approach did not explicitly allow for fundraising expenditures that occurred for reasons other than raising revenues, although it could have without loss of generality. Indeed, some writers have discussed nonrevenue fundraising objectives, such as that of increasing a nonprofit's visibility (Rose-Ackerman, 1982). This might lead nonprofits to fundraise at economically "inefficient" levels.

The implicit assumption in Steinberg's model is that the nature of the objective determines the level of fundraising, which controls donations. An alternative way of understanding the objectives-fundraising-donations mechanism is provided by noneconomists, such as Frumkin and Kim (2001). They suggest that donations could theoretically be affected by efficiency itself—and not be entirely mediated by fundraising efforts—because donors might care about efficiency for its own sake.

James' 1983 article on nonprofit growth makes predictions about nonprofit objectives that theoretically complement Steinberg's empirical model. James suggested that nonprofits will tend to produce unfavored—but lucrative—products in order to cross-subsidize favored—but mostly unprofitable—products. For example, private universities might teach undergraduate students primarily to subsidize research on unusual topics. This theory would predict that nonprofits will act in ways that maximize their ability to provide core services. It would also predict that nonprofits will tend to have a disadvantage in industries (such as health care) in which they compete with for-profits, a point made by Schiff and Weisbrod (1991). This is because for-profits will tend to shed the unprofitable services, unless compelled otherwise by law.[3]

As I alluded to earlier, quality is a particularly elusive maximand, because of the difficulty one has in defining and measuring it across the nonprofit sector. An early reference to this as an explicit objective of health nonprofits came from Newhouse (1970), and it has been featured prominently in a number of economic models (Malani, Philipson, & David, 2003; Easley & O'Hara, 1983) that assume nonprofits crop up when quality is important to consumers, but is unobservable—so for-profits would have an incentive to shirk.[4]

One relatively well-developed literature on quality resides in the arts. The most notable theoretic treatments are Throsby (1990) and Hansmann (1981). The former creates a useful taxonomy of quality dimensions—asking what quality *is*—for arts organizations, while the latter leaves the concept ambiguous, but explicitly models

[2] A similar study by Weisbrod and Dominguez (1986) looked at how nonprofits raise revenues with fundraising expenditures and core service spending.

[3] Sloan (1998) finds that while nonprofit hospitals with a mission to treat all patients are more likely to locate in poorer areas than for-profit hospitals, they are not more likely, *all other things equal*, to treat nonpaying patients.

[4] The empirical evidence on this point is ambiguous. One particularly provocative result comes from Heinrich (2000), who finds no quality differences at all between for-profit and nonprofit job-training service providers.

it in understanding the objective function of a performing arts firm. Hansmann's conclusions are that, if a nonprofit is a service maximizer, quality will tend to be suboptimally low; if the organization is a quality maximizer, quality will generally be suboptimally high (relative to service levels). If the organization is a budget maximizer, a social optimum in quality may be obtained—but only by coincidence.[5] These conclusions are useful for interpreting the results in this paper.

MODELS

My theoretical approach here follows Steinberg's. I begin by supposing a nonprofit's "organizational utility" can be modeled as a convex combination of total revenues and service:

$$u = \alpha S + (1 - \alpha)TR \tag{1}$$

where u is utility, $0 \leq \alpha \leq 1$, TR is total revenues, and S is service spending. If the nonprofit is a pure budget maximizer, $\alpha = 0$; if it is a pure service maximizer, $\alpha = 1$. Values of α that are found empirically outside the range of [0,1] would be interpreted as an indication that nonprofits follow an objective not adequately described by this specification. Indeed, this setup is really only intended to unearth financial objectives, and the qualitative goals they simultaneously represent. If this is too much at variance with the actual range of nonprofits' nonfinancial goals, the model will produce results that are not meaningful. I will return to this point later in the paper.

TR is divided between earned revenue (X) and unearned revenue (D) from donors and governments, so

$$TR = D(F) + X. \tag{2}$$

D is an increasing function of fundraising expenditures, so $D' > 0$. Total cost (TC) can be divided between fundraising (F) and service spending (S), so

$$TC = F + S. \tag{3}$$

Note that I am explicitly lumping administrative expenses into the "service" category. In the next section, I will demonstrate why doing so is empirically unproblematic for my core results.

Constraining the nonprofit's profits each period to zero,

$$\pi = TR - TC = 0.[6] \tag{4}$$

Combining equations (1–4),

$$u = \alpha[D(F) + X - F] + (1 - \alpha)[D(F) + X]. \tag{5}$$

[5] In one empirical paper designed specifically to test Hansmann's model, Luksetich and Lange (1995) study the objectives of American orchestras of different sizes in the 1970s and '80s. They find that, in general, large (in budget) orchestras are primarily quality maximizers and secondarily budget maximizers. In contrast, medium and small orchestras tend to be audience maximizers. In a related paper, Gapinski (1985) found that arts nonprofits tend to maximize service.

[6] For simplicity and without loss of generality, this model does not allow for borrowing or saving across periods by the nonprofit. This assumption is unproblematic in the empirical specification that follows, which only requires that this be true *on average* for my results to be interpretable. And in this structural model, the assumption could be easily relaxed in an intertemporal framework.

The nonprofit decides which level of fundraising to pursue in order to maximize whatever objective it has, and thus maximizes u with respect to F. The first-order condition of equation (5) is

$$\frac{\partial u}{\partial F} = \alpha(D' - 1) + (1 - \alpha)D' = 0.^{7} \tag{5}$$

Equation (5) tells us that, if the firm is a budget maximizer, the marginal returns to F are zero; if it is a service maximizer, the returns are unity. These predictions are intuitive: A service maximizer seeks the highest net total return on fundraising (the last dollar spent earns a dollar back, so all preceding dollars earn a profit, and none earns a loss), such that the maximum is left over to spend on service; a budget-maximizer seeks the highest level of revenues, irrespective of the costs involved in raising them, so it will fundraise all the way until revenues are squeezed out completely (unless institutional pressures prevent this from occurring).

A regression equation that tests equations (5) is, for a nonprofit firm i,

$$D_i = \lambda + \mu F_i + \delta S_i + \theta' X_i + \varepsilon_i, \tag{6}$$

where X is a vector of state dummies, included to reflect the considerable variance between states in tax regimes and other economic circumstances facing nonprofits.[8] The coefficient μ measures the marginal impact of F in equation (5). S is included in this equation because, given its role in the structural model, it should be correlated with both D and F, and hence should be held constant in order to ascertain the marginal effect of F on D. Its coefficient tells us the effect on donations of providing an additional dollar of core services.[9]

The implicit assumption in this empirical model is that fundraising affects donations, but not vice versa, so that the marginal relationships are not endogenous. This assumption is supported empirically.[10] The rationale for this assumption is that nonprofits generally make their spending plans for F on the basis of budgets that are set in advance. In addition, most organizations cannot react immediately in their fundraising campaigns to changes in revenues. Thus, annual cross-sectional data are appropriate for estimating equation (6).

DATA

The data I use to estimate equation (6) were collected from the IRS 990 forms filed annually by most 501(c)(3) nonprofit organizations in the United States with annual gross receipts above $25,000. These data are compiled by the National Center for

[7] The second-order condition holds for a global maximum.

[8] The reference group is U.S. territories outside the 50 states (for example, Puerto Rico, Guam, American Samoa, and so on).

[9] Other variables might ideally be held constant as well, to give the coefficient μ even greater fidelity. For example, the elements of S, such as wages, program spending, and administrative expense, might be broken out to see if they are individually important. In a later section, I investigate this idea explicitly to make sure that the estimate of μ in equation (6) is defensible.

[10] The concept of Granger Causality (Granger, 1969) is useful for this purpose. (For an explanation and application among nonprofits, see Brooks, 1999.) For example, using a panel of 63 American "public" nonprofit radio stations from 1993–95, I find that, while prior years' fundraising predict current donations, prior years' donations do not predict current fundraising (where significance is measured at the five-percent level).

Charitable Statistics (NCCS) at the Urban Institute, and are publicly available.[11] The data indicate amounts and sources of both revenues and expenditures for each nonprofit. For more information on these data, how they are gathered, and problems with using them, see the Appendix to this paper. In general, the 990 data are not unproblematic. For example, about 70 percent of nonprofits never file 990 forms, because they are either too small or not required to as religious congregations (Hodgkinson et al., 1993). It is important to keep in mind that results based on these data, while useful, only represent a slice of the nonprofit world. It is possible that extremely small organizations and religious bodies behave in ways not captured here.

The NCCS data are broken down across 26 subsector-specific categories, organized according to the National Taxonomy of Exempt Enterprises (NTEE).[12] Besides the entire sample, I have constructed five nonprofit subgroupings, including arts and culture, education, health, social welfare, and other organizations. The first four of these groups comprise most (71 percent) of the total revenues in the entire sample. "Other organizations" are scattered across smaller categories. The descriptive statistics for these data are summarized in Table 1.

The subsector in this sample with the highest average level of unearned revenues, education, also had the highest average spending on fundraising. The subsector with the lowest average unearned income, arts and culture, had the second-lowest average fundraising budget, after social welfare (which had the second-lowest average unearned revenue level). These results are fairly unsurprising: Education nonprofits—especially private colleges and universities—typically rely (and spend extensively to raise) elite philanthropy. In contrast, social service nonprofits frequently fundraise little but receive a large proportion of their revenues from government contracts—which explains a low average *F*, relative to *D*. Health nonprof-

Table 1. Variable means for six nonprofit groupings.

	Full Sample	Arts & Culture	Education	Health	Social Welfare	Other Nonprofits
Unearned revenues (D)	$928,908	$604,373	$1,500,670	$1,191,040	$738,072	$784,813
Fundraising expenses (F)	$47,311	$49,368	$86,537	$59,192	$26,152	$39,882
Service spending (S)	$3,153,420	$885,706	$3,976,090	$11,712,100	$1,603,290	$1,075,260
Arts	0.10	1	0	0	0	0
Education	0.17	0	1	0	0	0
Health	0.14	0	0	1	0	0
Social welfare	0.30	0	0	0	1	0
Other nonprofits	0.29	0	0	0	0	1
Number of firms	189,881	19,611	32,177	25,868	56,540	55,685
NTEE categories	A-Z	A	B	E-H	J, L, M, O, P, S	C, D, I, K, N, Q, R, T-Z
Proportion of organizations reporting zero donations	0.16	0.07	0.19	0.18	0.17	0.16

Note: All figures (except proportions) are in 2001 dollars.

[11] See nccsdataweb.urban.org.
[12] See http://www.guidestar.org/npo/ntee.jsp.

its had by far the highest level of service spending, reflecting the fact that very large hospitals tend to derive most of their income from fees.

An important issue in estimating equation (6) with the data in Table 2 involves model specification. Early empirical studies of charitable giving and unearned revenues to nonprofits used least squares procedures. However, there are typically a substantial number of zero donations in samples of donors and zero unearned revenues among organizations. Among the full sample here, for example, 16.3 percent of the organizations had no unearned revenues. Therefore, the use of ordinary least squares or similar models could lead to inconsistent estimates. Limited dependent variable models, such as the tobit specification (which I use here) make it possible to cope with a large number of zeros on the left-hand side of the model (McClelland & Kokoski, 1994).[13]

The data exhibit evidence of heteroscasticity, which I correct using White's (1980) estimator of the regression coefficient variance. After this correction, we can no longer reject the hypothesis of homoscasticity using Breusch-Pagan Lagrange multiplier tests.

RESULTS AND DISCUSSION

Table 2 presents the tobit estimation of equation (6) for the full sample, including dummy variables for each of the subsectors.[14] I have suppressed the coefficients for the state-level dummy variables. To calculate the marginal effects implied by the coefficients, I use the formula

$$\frac{\partial E[D \mid Z]}{Z} = \Phi\left(\frac{\pi' Z}{\sigma}\right)\pi, \tag{7}$$

where $Z = [1,F,S,X]$, $\pi = [\lambda, \mu, \delta, \theta]$, and Φ is the proportion of the sample that has positive unearned revenues.

We can see that the fundraising coefficient is significantly above both unity and zero, which places it outside the range of possibilities defined by the structural model. This can be interpreted in two ways. First, we might conclude that the theoretical model does not describe very well the possible objectives of nonprofits, and what they seek falls outside the range of service or budget. For example, they might seek to maximize quality, or some other variable. Second, and more compellingly in my view, we might interpret the coefficient of 2.91 as *approaching* unity—the service maximization objective—but indicating insufficient fundraising spending to meet this objective.

Service spending is significant, although close to zero. This suggests that, as we might expect, nonprofits tend to spend as much as they can on their core services. Among the subsector dummies, we see that the arts are expected to receive more

[13] For an accessible introduction to the tobit model, see Long (1997). Cragg (1971) discusses a possible complication in this type of context: While I implicitly assume that all organizations are comparable with respect to donations, it is possible that those that receive donations and those that do not are fundamentally different, and that combining them in one sample is inappropriate. And indeed, a test that the log-likelihood of the tobit is equal to the sum of the log-likelihoods of a probit (on the giving choice) and a linear regression on the nonzero observations shows that the hypothesis that the two types of organizations are drawn from the same distribution can be rejected. Thus, a conservative interpretation of my results might be that they only apply to the organizations with the nonzero donations.

[14] The reference group is "other nonprofits" in Group 6.

Table 2. Tobit estimation for full sample.

Independent Variable	Coefficient	Standard Error	Marginal Effect
Constant	1,782,480*	359,330	871,467
Fundraising expenses (F)	5.96*	0.03	2.91
Service spending (S)	0.169*	0.001	0.083
Arts	468,389*	72,394	228,998
Education	–247,432*	62,167	–120,971
Health	–1,671,970*	67,290	–817,436
Social welfare	–53,848	52,825	–26,327
N	189,881		

Note: * indicates significance at the .05 level or higher.

Table 3. Tobit estimations for individual subsectors.

	Coefficient (Standard Error) [Marginal Effect]				
	Arts & Culture	Education	Health	Social Welfare	Other Nonprofits
Constant	–174,779 (683,838) [–94,679]	3,329,870* (1,062,040) [1,637,160]	1,183,240 (1,507,790) [574,168]	3,596,630* (395,824) [1,877,895]	–877,782* (353,787) [–436,552]
Fundraising expenses (F)	3.41* (0.09) [1.85]	2.69* (0.09) [1.32]	5.37* (0.05) [2.61]	0.053 (0.052) [0.028]	3.61* (0.05) [1.8]
Service spending (S)	0.566* (0.004) [0.307]	0.332* (0.002) [0.163]	0.04* (0.001) [0.02]	0.328* (0.002) [0.171]	0.584* (0.003) [0.291]
N	19,611	32,177	25,868	56,540	55,685

Note: * indicates significance at the .05 level or higher..

unearned revenues than the reference group, education and health organizations receive less, and social welfare organizations receive approximately the same, on average.

Table 3 breaks down the sample by subsector, fitting a different model for each. As above, the state dummy variables are not listed. For the obvious reasons, the sectoral dummies are not included.

In four of the subsectors—arts, education, health, and "other"—the fundraising coefficient significantly exceeds both unity and zero, as in the case of the full sample. Using the interpretation above, we might conclude that most nonprofits in these categories approach service maximization, but fundraise insufficiently to meet this goal. This might occur due to the belief within an organization that high levels of fundraising are not compatible with the nonprofit's actual mission. Alternatively, it might reflect implicit restrictions on fundraising imposed by donors who feel such spending is "wasteful" (Frumkin & Kim, 2001). If this is the case, it is

ironic that this leads nonprofits to inefficiency in forgoing net revenues that could be used for core services. In the simplest case—if nonprofit managers were entirely free to choose their fundraising budgets—these results would lead to the simple recommendation that managers should spend more money on fundraising than at present. However, if this is not possible because of organizational or donor-imposed restrictions on fundraising, a policy change among organizations and donors in this area would enhance organizational effectiveness.[15]

In contrast to the other subsectors, social welfare organizations have a coefficient on *F* which insignificantly differs from zero (but significantly differs from one). Although this identifies the objective of these organizations as one of budget maximization, there are other possible interpretations. For example, it may be the case that fundraising is seen as some sort of an investment in future donations for these firms, and the payoff to a fundraising dollar should not be measured in a single year. Alternatively, given the push many organizations are feeling to establish savings, fundraising beyond equimarginality with current year revenues might be rational—assuming fundraising dollars are building savings that will ultimately compensate for the low current returns. Finally, it might simply be that social welfare nonprofits tend to fundraise poorly, spending money in ways that see little return. Social welfare nonprofit managers—and the government agencies with which they contract and interact—would do well to investigate this phenomenon.

Recall that the simple conceptual model in this paper lumps all non-*F* spending into one larger category, S. Whether certain kinds of spending, particularly administrative expenditures, should be called "service" is open to debate, but is not the focus here. What we might be concerned with, however, is whether this simplification has any gross distortionary impact on the central results of this paper—the magnitude and significance of the coefficient on *F*. To investigate this, I picked one of the subsectors, arts and culture, and redefined my empirical model as

$$D_i = \lambda + \mu F_i + \delta S_i + \pi A_i + \gamma O_i + \varepsilon i, \tag{8}$$

where *A* separates out administrative expense, *S* is true program service spending, and *O* is other costs. I fit equation (8) with IRS data from 2000 that have a somewhat higher level of expenditure detail than the large sample used in the earlier regressions.[16]

The results of the tobit regression are summarized in equation (9). The marginal effect is in brackets beneath each raw coefficient.[17]

$$\begin{array}{llllll} D_i = & 174{,}920 + 2.27F_i + 0.58S_i + 064A_i - 3.54O_i \\ & [80{,}865] \quad [1.05] \quad [0.27] \quad [0.30] \quad [1.64]. \end{array} \tag{9}$$

While somewhat lower than the value from the 2001 arts data using the simpler model, the coefficient on *F* is broadly consistent with the 2001 arts data in that it is

[15] The results here might also indicate problems in product quality (however quality is defined in the various industries studied here). Recall the main theoretical prediction from Hansmann's (1981) work was that service maximizers will tend to underproduce quality in their products. While his predictions focused on the performing arts, we might like to investigate this prediction in other subsectors.

[16] The arts and culture data to fit equation (8) were taken from the NCCS-Guidestar National Nonprofit database. The organizations in these data are similar to arts and culture subsample used for Table 3, except for the firms that either entered or left between 2000 and 2001. Also, these data include filers of the 990-EZ form, so this sample is somewhat larger, at 23,515 firms.

[17] The state-level dummies were included in this regression, but the results are suppressed here.

significantly positive, and exceeds one (although not by enough to reject the hypothesis that it equals unity, meaning we cannot reject true service maximization as an objective for arts firms).

The work upon which this paper most concretely builds is Steinberg's (1986), so it is worth briefly contrasting the results between the two sets of findings. While Steinberg found that arts, education, and social welfare firms maximized service, health firms maximized budget. My findings are similar with respect to the arts and education organizations, but differ with respect to health and social welfare organizations. These differences might be due to the fact that the studies use data that are 25 years apart, or because Steinberg looked at four metropolitan areas as opposed to a nationwide sample.[18] In either case, it should not be very surprising that there would be time and geographic variation in the behavior of nonprofit organizations.

IMPLICATIONS FOR PUBLIC POLICY

The results in this paper suggest unintended consequences from government interaction with nonprofits. These consequences come from the effects of direct aid on the ability of nonprofits to fundraise, and from the restrictions on fundraising that governments often make.

Table 4 shows that direct government funding of nonprofits constitutes an important part of their revenues: 31 percent across all types of organizations. There is considerable variation within the sector, however, with arts groups receiving an average of just 10 percent of their revenues from governments and social welfare organizations receiving an average of 52 percent of their funds from the public sector.

Direct subsidies from government may help explain the fundraising coefficients—in particular, the coefficients for the arts, education, health, and "other nonprofits" that are above equimarginality and hence too high from an economic efficiency standpoint. Specifically, it may be that government funds displace, or "crowd out" donations and/or fundraising activity, potentially leading to suboptimal fundraising effectiveness or effort.

Studies in the economics literature generally find that an extra dollar in subsidies crowds out between 5–40 cents in private donations. For example, Kingma (1989) estimates an effect of 14 cents in the arts; Steinberg (1993) finds 30 cents in education; Khanna, Posnett, and Sandler (1995) estimate 18 cents in health; and Schiff (1990) finds 40 cents for social welfare. These studies are based on the hypothesis that government funding negatively affects the propensity to donate. A complementary hypothesis offered by Andreoni and Payne (2003) is that this funding neg-

Table 4. Direct government subsidies to nonprofit organizations, 1997.

	Billions of Dollars	Percent of Total Revenues
All nonprofits	207.8	31.3
Arts and culture	1.5	9.7
Health	137.7	42.2
Education	23.1	19.4
Social welfare	40.1	52.1

Source: Independent Sector (2002).

[18] Also, Steinberg used panel data and focused on the trend in donations.

atively affects the propensity of nonprofit managers to seek private donations, and they find some limited evidence that public subsidies do indeed crowd out fundraising expenditures.

The results in this paper support Andreoni and Payne's hypothesis, indicating that governments are in some part responsible for inefficient nonprofit behavior. To see this, note that, by the Chain Rule, $\frac{\partial D}{\partial G} = \frac{\partial D}{\partial F}\frac{\partial F}{\partial G}$, so $\frac{\partial F}{\partial G} = \frac{\partial D/\partial G}{\partial D/\partial F}$, where G is direct government funding.[19] For the full sample fundraising coefficient of 2.91 in Table 2, a crowding out range of 5–40 cents on the dollar suggests that each dollar in government subsidies displaces between 2 and 14 cents in fundraising, on average. Table 5 summarizes the effects for the individual subsectors (except social welfare, for which the fundraising coefficient was insignificantly different from zero, making the marginal effect of government funds on fundraising inestimable). I employ the coefficients from Table 3, and assume a constant crowding out rate of –0.15.

The implication of this analysis is that public sector support of nonprofits has the unintended consequence of distorting the incentives of nonprofit managers, leading them to fundraising decisions that are economically suboptimal. While 2–14 cents of displacement might seem fairly trivial, note that public subsidies are about eight and a half times greater than fundraising expenditures, on average across the sample, greatly amplifying their net dollar impact.[20] For example, consider a typical nonprofit, which receives $500,000 in government grants each year and spends $60,000 on its fundraising. Assuming a displacement rate of just 5 cents per grant dollar, this suggests that the organization is spending about 40 percent less on fundraising than it otherwise would be, probably pulling it above the equimarginal fundraising level.

There are two possible reasons why nonprofits might fundraise less when they receive government funding. First, they might seek autonomy from the wishes of donors. Rose-Ackerman (1987) shows that certain kinds of grants can drive fundraising down, as managers can "afford" to chase fewer donors who would impose their preferences on the organization. Second, many government funders place explicit restrictions on the use of public funds by nonprofits, and these restrictions frequently prohibit nonservice spending, such as fundraising. For example, New York State health and social service contracts generally stipulate

Table 5. The estimated impact of government subsidies on fundraising expenditures.

	Marginal Effect of F on D	Marginal Effect of G on F
Arts and culture	1.85	–0.08
Education	1.32	–0.11
Health	2.61	–0.06
All nonprofits	2.91	–0.05

[19] Recall that the data in this paper conflate both private donations and government transfers in the variable D. Therefore, this assumes that the private donations component is the only part affected by spending on fundraising. This could be relaxed without violence to the central conclusion here.

[20] The figures in this section come from the 2002 Form 990 data, obtained from the National Center on Charitable Statistics.

that funds only be used directly to provide specific core services (New York State Assembly, 2003).

The most actionable implication of these results for policymakers is that they should be careful in the way they limit the uses of the public money granted to nonprofits, because doing so may have perverse efficiency consequences. However, the findings here may also inform the broader debate about public contracting and privatization. Many movements for public service privatization are predicated on the idea that nonprofits can provide services more effectively than government agencies (Van Slyke, 2003). This assumption may be questionable if government funds themselves lower the willingness and ability of organizations to raise sufficient private funds to provide the services that are at the heart of their missions.

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APPENDIX

FORM 990 DATA FOR 2001

Section 501 of the U.S. Internal Revenue code defines nonprofit 501(c)(3) organizations as

> Corporations, and any community chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary, or educational purposes, or to foster national or international amateur sports competition (but only if no part of its activities involve the provision of athletic facilities or equipment), or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private shareholder or individual, no substantial part of the activities of which is carrying on propaganda, or otherwise attempting, to influence legislation . . . and which does not participate in, or intervene in (including the publishing or distributing of statements), any political campaign on behalf of (or in opposition to) any candidate for public office.[21]

In return for exemption from corporate taxation and the right to accept money gifts that are tax-deductible for donors, organizations that officially incorporate as nonprofits are enjoined from distributing any profits to owners of the organization. Furthermore, those with gross annual receipts in excess of $25,000 are required to file a return that provides information on revenues and expenditures. This form, the IRS Form 990, is filed by more than a quarter-million separate nonprofits during any three-year period.[22]

The data in this study were acquired in early 2003 from the National Center for Charitable Statistics (NCCS), a program of the Center on Nonprofits and Philanthropy at the Urban Institute. These are "core file" data, which are assembled from the data in each nonprofit organization's 990 form and compiled in the IRS Business Master Files and Return Transaction Files. In early 2003, the most recent tax returns for the approximately 265,000 501(c)(3)s came from the years 1999–2002, although by far the most common year's return in the sample was 2001 (72 percent of the sample). For comparability—especially given the economic fluctuations that occurred in the 1999–2002 period, in this study I have only included the approximately 190,000 organizations that filed 990 long-form 2001 returns.

The data I use in this study are described in Table A1.

Table A1. NCCS and constructed variables from IRS Form 990 returns, 2001.

Variable	Definition	Source
D	Public support, from private and government sources	Form 990 line 1d
EXPS	Total expenses	Form 990 line 17
F	Fundraising expenses	Form 990 line 15
S	Spending on core services	Constructed as EXPS - F
X	State dummy variables	

[21] Source: U.S. Internal Revenue Code *TITLE 26, Subtitle A, CHAPTER 1, Subchapter F, PART I, Sec. 501(c)3.*

[22] Nonprofits with gross receipts below $100,000 (and less than $250,000 in total assets) can elect to file a simpler version of the 990, called the 990EZ. I have left the filers of this form out of the sample.

The Form 990 data are far from unproblematic for research uses, as a number of authors (e.g., Abramson, 1995; Froelich & Knoepfle, 1996; Froelich, Knoepfle, & Pollak, 2000; Rose-Ackerman, 1987) and a major study by the Urban Institute have shown.[23] As noted earlier, Hodgkinson et al. (1993) show that the 990s provide a skewed view of the nonprofit world, because about 70 percent of organizations are either too small to have to file, or are among the majority of religious congregations that are not required to file. Another problem with the existing data concerns their completeness and accuracy (Abramson, 1995).

As part of an effort to clean the 990 data of unreliable values—particularly D and F, which the studies cited above have found especially often to be inaccurate—I have expunged obviously incorrect responses. These included negative contributions, negative fundraising expenses, and cases in which fundraising expenses were recorded as higher than total expenses. In all, fewer than one percent of cases were removed for these reasons, bringing the full sample for the data analysis to 189,881.

[23] See <www.coststudy.org>