Public Subsidies and Charitable Giving: Crowding out, Crowding in, or Both?  

Arthur C. Brooks

Abstract

Whether government subsidies to nonprofit organizations leverage (crowd in) private donations, or rather crowd them out has been actively debated for some time. A third hypothesis, explored theoretically and tested empirically in this paper, is that the two phenomena are actually not inconsistent with one another: At low levels of subsidies, government support may stimulate private giving, whereas at high levels it could have just the opposite effect. The model presented is based on this idea, which yields implications relevant to nonprofit management and public policy, and tests it with data on symphony orchestras. The conclusion is that the maximization of private donations and total "unearned" revenues are not compatible goals. Further, nonprofits that suffer from short-term liquidity problems or managerial short-sightedness may face a "subsidy trap," in which they are forced to rely on suboptimal levels of subsidies in terms of maximizing the firm's revenues. © 2000 by the Association for Public Policy Analysis and Management.

INTRODUCTION

Considerable energy in the nonprofit and public policy communities is spent trying to understand the relationship between public subsidies and private philanthropy: Are they substitutes or complements? Or, in the language of nonprofit economics, is there "crowding out," or "crowding in"? This question is an important one for nonprofit organizations and public agencies that support them. If public support is a substitute for private donations, managers and public officials should know the mechanism by which one revenue source displaces the other, such that fund-raising investment and public funding programs are not designed and implemented in a self-defeating way. On the other hand, if they are complements, the leveraging effect is valuable to understand so it can be exploited optimally.

This paper departs from the existing literature on this question: It creates and tests a model that suggests that crowding out and crowding in are not incompatible phenomena. In so doing, it arrives at several new implications for public and private nonprofit policy and management. First, it predicts that either crowding in or crowding out might occur, and that a nonprofit might even alternate between the two. Second, it suggests that the goals of the maximization of "unearned" revenues and private
donations cannot be pursued simultaneously. Third, it exposes a "subsidy trap," in which certain nonprofit firms, due to illiquidity or managerial short-sightedness, get "stuck" year after year relying on levels of public subsidies that correspond to total revenues that are below the highest possible level. It also suggests ways that nonprofits can (and cannot) escape this trap.

THE ISSUE

In the continuing polemic over the role of government funds in the finances of nonprofit organizations, it has become common to hear that government support provides "seed" money to nonprofit firms (National Endowment for the Arts, 1998). Particularly at low levels of support, it is argued, public funds can get the ball rolling for the private donations that make up much of most nonprofits' revenues. In contrast to this argument, a case in the public economics literature has been made that public subsidies will not stimulate private giving to nonprofits; indeed, they may even crowd this giving out. This falls within the family of arguments about the crowding out of private expenditures by government provision of goods and services (Friedman, 1962; Feldstein, 1974; West, 1975).

Theory relevant to this subject began with the result from standard neoclassical price theory that the only donations not displaced would be those from donors with a very high demand for the nonprofit's product, but who were unable to manipulate subsidy levels (Hochman and Rodgers, 1977). That is, the crowding-out phenomenon should almost certainly be the one in effect. Subsequent theory and experimental work has generally been consistent with this, predicting that crowding out should be complete (Bergstrom, Blume, and Varian, 1986; Warr, 1982), or at least partial (Andreoni, 1993; Duncan, 1999). Relaxing the assumptions of the neoclassical model, however, a few theoretical papers have predicted that, on the contrary, there might be crowding in instead (Rose-Ackerman, 1986; Seaman, 1980). One area of agreement among all the theoretical treatments is that the question must be settled empirically.

The empirical nonprofit literature has produced no unambiguous answer on this score. A number of studies have found evidence of crowding out (e.g., Payne, 1998; Kingma, 1989; Steinberg, 1985). Others, however, have found no significant relationship between the revenue sources (e.g., Brooks, 1999; Khanna, Posnett, and Sandler, 1995), or even some slight leveraging effect (e.g., Schiff, 1985). This paper suggests that these seemingly contradictory findings may be reconcilable, beyond just attributing them to structural differences between firms within the nonprofit sector. The nature of the relationship between public subsidies and private giving to nonprofit organizations may depend on their magnitude relative to one another.

DO PUBLIC SUBSIDIES LEVERAGE OR CROWD OUT PRIVATE GIVING? MAYBE BOTH

While the literature has traditionally tested the question of whether leveraging or crowding out occurs, a compelling argument can be made that it might be the case that the two effects are not mutually exclusive. Imagine a typical nonprofit firm, one that can receive "unearned" revenues from both governmental (G) and private sector (P) sources. Assume that private donors react in their giving to government subsidies as well as to a number of other variables (X). Also assume that if the firm were to receive no funding from the government, its unearned revenues would be $P_0 > 0$ dollars of private support.

1 While not satisfying from an economic standpoint for the obvious reasons, the term "unearned revenue" is common parlance in the nonprofit sector; for this reason, it is used here to denote contributions that are not direct compensation for the sale of a product.
As government subsidies become positive, one can see how the leveraging argument might be the relevant one. Low levels of public funds may be effective in "priming the pump" for private donations. This idea would seem consistent with the finding that smaller organizations—those presumably with relatively undeveloped philanthropic bases—see a large return to their (small) fund-raising initiatives, such as matching funds campaigns (Brooks, 1997). In addition, the organization functioning with no government support might be entirely unknown or just starting out, and as such might benefit from the publicity and credibility, however small, associated with a grant.

When government funds increase beyond a certain point (call it \(G^*>0\)) for this firm, the crowding-out arguments begin to sound more plausible. Organizations that are largely funded by the government begin to appear as quasi-public agencies, and just as few citizens make private contributions (voluntarily) to their governments, fewer and fewer people may be inclined to give to these organizations. In addition, heavily subsidized firms often suffer from the image of requiring public funds to stay afloat, and thus might inspire little confidence among private contributors. The top half of Figure 1 graphically depicts this model, as described so far:

The strict concavity of the curve drawn in Figure 1 may at first seem a strong assumption to make. However, it actually allows the fewest possible additional assumptions to be made on the relationship between private and public funding. Specifically, in the absence of a compelling argument for doing so, no acceleration of the leveraging effect before the critical point is assumed, nor is any deceleration of the crowding-out effect beyond this point. Thus, strict concavity is assumed to maintain the greatest possible generality.

The relationship in the top of Figure 1 can be expressed mathematically as follows.

\[
P = P(G,X) \tag{1}
\]

where \(P \in \mathbb{R}_+, \ X \in \mathbb{R}_+, \) and \(G \in [0,G_{\text{max}}], \) where \(G_{\text{max}} \in [G^*,\infty) \) is the point at which the organization is entirely publicly funded and all private gifts are crowded out. In addition, \(P'(G^*,X)=0 \) and \(P''(G,X)<0 \) for all values of \(G>0, \) by the strict concavity assumed above. This indicates the presence of a unique global maximum level of \(P, \ P^*, \) corresponding to the level of public subsidies \(G^*. \)

This is an important assumption: There is no simultaneity between \(P \) and \(G. \) While \(G \) influences \(P, \) the reverse does not occur. But this assumption has empirical justifications, as will be shown in the next section.

The top of Figure 1 suggests a natural extension of the model from the relationship between \(G \) and \(P \) to that between \(G \) and total unearned revenues \((TR). \) Defining

\[
TR = P(G,X) + G \tag{2}
\]

we can see that \(TR \) is a concave function of subsidies, since \(TR''=P''<0. \) Further, maximizing \(TR \) with respect to \(G \) yields \(TR'=P'(G)+1=0, \) so

\[
P'(G^{**}) = -1 \tag{3}
\]

From the concavity of \(P, \) we can conclude that \(G^{**}>G^*. \) Note that at zero public subsidies, \(TR=P_0 \) since all unearned revenue comes from private donations. Similarly, at the maximum level of public subsidies (where the firm has become entirely public), \(TR=G_{\text{max}}. \) This is depicted in the lower half of Figure 1.
Figure 1. The relationship between total unearned revenues and public subsidies.

There is a point beyond which total unearned revenues actually fall when public subsidies increase. This relationship has two implications that will motivate the discussion in the following sections. First, Figure 1 suggests that there is a range of public subsidies that is too high from the standpoint of maximizing unearned revenues. Specifically, any level above $G^{**}$ will drive $TR$ below its maximum of $TR^{**}$. Second, if $TR$ were at its maximum at $TR^{**}$, there would tend to be crowding out between public subsidies and private donations. In Figure 1, this is seen in the fact that $G^{**}$ is to the right of $G^*$, and consequently sits on the downward-sloping portion of the $P(G)$ curve: As subsidies rise, donations fall.

In an ideal world, nonprofits would optimize by accepting only $G^{**}$ in subsidies while attracting $P^{**}$ in donations. In reality, however, charities may not be able to attract or control the right amount of subsidies, or may not understand the underlying relationship at work. As a result, firms may sit on any part of the $P(G)$ curve. Between $G=0$ and $G^*$, the firms experience crowding in; between $G^*$ and $G_{\text{max}}$, crowding out occurs. These two possibilities may explain why the empirical studies on this issue have seen such mixed results when measuring the phenomenon linearly. Indeed, the
The empirical section of this paper will reveal that both of these firm types are probably present among symphony orchestras.

**EMPIRICAL EVIDENCE AND INTERPRETATION**

Do the existing data on the nonprofit sector support the hypothesis of nonlinear crowding out? In general, this is a difficult question to answer because data are limited. Most specific nonprofit industries have very little variance in their data with respect to the level of public funding. (For example, it is rare that within a particular industry, one firm receives almost no public funding while another receives most of its revenues from the government.)

One exception to this lack of variance is the case of the arts nonprofit sector, owing to the fact that arts organizations tend to be organized and financed in a variety of ways, from volunteer ensembles to semiprofessional groups to full-time professional organizations. This variety translates into a wide variance in private philanthropy and public subvention, allowing testing of the hypothesis in this paper.

The data used to estimate the model represent 253 American symphony orchestras over eight concert seasons from 1984 through 1991. These data were collected by the American Symphony Orchestra League (ASOL) and aggregated into averages over groupings of orchestras of similar size in the Wolf Organization's *The Financial Condition of Symphony Orchestras* (1992). The groupings are as follows:

- 19 orchestras with 1991 budgets of $8.5 million to $38.7 million
- 22 orchestras with 1991 budgets of $5 million to $8.5 million
- 48 orchestras with 1991 budgets of $1.8 million to $5 million
- 68 orchestras with 1991 budgets of $.63 million to $1.8 million
- 96 orchestras with 1991 budgets of up to $630,000

Hence, the dataset consists of 40 observations: one observation for each of the five groups over eight years.²

The variance in these data can be seen in Table 1, which contains the descriptive statistics for the levels of government support, private giving, earned income, and the average number of concerts performed per year.

**Table 1.** Descriptive statistics on the orchestra data.

<table>
<thead>
<tr>
<th></th>
<th>Government support</th>
<th>Private support</th>
<th>Earned income</th>
<th>Concerts per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>$537,251</td>
<td>$1,598,774</td>
<td>$2,034,711</td>
<td>127</td>
</tr>
<tr>
<td>Median</td>
<td>$262,351</td>
<td>$799,434</td>
<td>$783,501</td>
<td>150</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>$558,421</td>
<td>$1,808,347</td>
<td>$2,683,876</td>
<td>70</td>
</tr>
<tr>
<td>Range</td>
<td>$1,842,618</td>
<td>$5,396,768</td>
<td>$7,877,434</td>
<td>211</td>
</tr>
<tr>
<td>Minimum</td>
<td>$17,874</td>
<td>$61,492</td>
<td>$38,373</td>
<td>14</td>
</tr>
<tr>
<td>Maximum</td>
<td>$1,860,492</td>
<td>$5,458,260</td>
<td>$7,915,807</td>
<td>225</td>
</tr>
</tbody>
</table>

² Obviously, data on the individual orchestras would be better than the averages. However, this is the only publicly available version of this proprietary dataset. And in spite of the limitation this presents, it will be shown that it is still useful.
The literature cited in the introduction on the crowding-out debate in general has tested empirical models of crowding out in a variety of ways (Steinberg, 1993, p. 103). The general idea in all of them is to regress a measure of private philanthropy on a measure of government support (and other relevant variables), and to do so in such a way that endogeneity between philanthropy and government subsidies does not bias the results unduly. Means to achieve this have included the use of instrumental variables (Brooks, 1999; Kingma, 1989), seemingly unrelated regression (Lindsey and Steinberg, 1990), and the assumption of an information lag in government support, in the case that this is theoretically supportable (Brooks, 2000). The last assumption is used here, as current-year public sector commitments to orchestras and other arts organizations nearly always represent government funding decisions made in a prior period (meaning that public support paid this year can affect private philanthropy, but not vice versa).

Models will be fitted to these panel data, which have been adjusted for the divergent scale of operations of the different-sized orchestras by dividing each observation through by the number of concerts presented per year by the mean orchestra in the group. All dollar-denominated variables are in constant 1996 dollars. Consistent with the literature already cited, the variables included in the regressions are:

- \( \text{PRIVATE}_{it} \) = average private donations for orchestras in group \( i \) in year \( t \), divided by the average number of concerts performed.
- \( \text{PUBLIC}_{it} \) = average government subsidies for orchestras in group \( i \) in year \( t \), divided by the average number of concerts performed.
- \( \text{DEVELOPMENT}_{it} \) = average fundraising expenditures for orchestras in group \( i \) in year \( t \), divided by the average number of concerts performed.
- \( \text{EARNED}_{it} \) = average earned income for orchestras in group \( i \) in year \( t \), divided by the average number of concerts performed.
- \( \text{GROUP \,} i \) (where \( i = 1, 2, 3, 4 \)) = dummies for four of the five groups.\(^3\)
- \( \text{TIME} \) = trend variable.

In addition, to test the central hypothesis, a squared term for government support is added:

- \( \text{PUBLIC-SQ}_{it} \) = squared average government subsidies (divided by the average number of concerts) for orchestras in group \( i \), in year \( t \).

The models estimated regress this period’s philanthropy on a lagged value of itself (to capture “habitual” behavior in giving), this period’s earned revenues and development expenditures (to net out the effects of the orchestra’s concert income and “advertising” expenses for donations), the time trend, and the group dummies.\(^4\)

Support of the hypothesis that leveraging is followed by crowding out of philanthropy as government support increases would be seen in the significance, sign, and magnitudes of the regression coefficients for \( \text{PUBLIC} \) and \( \text{PUBLIC-SQ} \). Specifically, the hypothesis is supported if the coefficient on \( \text{PUBLIC} \) is positive and significant, the coefficient on \( \text{PUBLIC-SQ} \) is negative and significant, and the resulting knee in the curve occurs reasonably close to the range of the data on \( \text{PRIVATE} \).

Two models are fitted to the data. First, the coefficients are estimated with ordinary least squares (OLS). Perhaps not surprisingly, diagnostics indicate problems with

\(^3\) The effect for the fifth group is caught in the regression’s constant term.
\(^4\) Lagged values of \( \text{PUBLIC} \) and \( \text{PUBLIC-SQ} \) were not found to be either significant or to contribute materially to the explanatory power of the model. They are thus omitted to conserve scarce degrees of freedom.
Table 2. Regression estimates of the nonlinear crowding-out model.

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>OLS Model</th>
<th>GLS Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBLIC(_t)</td>
<td>2.0286 (0.8012)**</td>
<td>2.4956 (0.2852)***</td>
</tr>
<tr>
<td>PUBLIC-SQ(_t)</td>
<td>-0.00013 (0.00005)**</td>
<td>-0.00015 (0.00002)***</td>
</tr>
<tr>
<td>PRIVATE(_t)</td>
<td>-0.11034 (0.1182)</td>
<td>-0.0357 (0.0710)</td>
</tr>
<tr>
<td>DEVELOPMENT(_t)</td>
<td>2.0774 (0.9780)**</td>
<td>3.0353 (0.6113)***</td>
</tr>
<tr>
<td>EARNED(_t)</td>
<td>0.12007 (0.2081)</td>
<td>-0.1500 (0.0985)</td>
</tr>
<tr>
<td>GROUP 1</td>
<td>3497.0 (3303.0)</td>
<td>4957.0 (1528.0)***</td>
</tr>
<tr>
<td>GROUP 2</td>
<td>-238.67 (1774.0)</td>
<td>-700.19 (799.3)</td>
</tr>
<tr>
<td>GROUP 3</td>
<td>-803.42 (424.9)*</td>
<td>-572.51 (233.5)***</td>
</tr>
<tr>
<td>GROUP 4</td>
<td>-497.32 (508.5)</td>
<td>-125.14 (219.8)</td>
</tr>
<tr>
<td>TIME</td>
<td>138.02 (119.5)</td>
<td>198.10 (36.87)***</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>825.86 (1386.0)</td>
<td>-56.369 (562.7)</td>
</tr>
<tr>
<td>Adjusted R(^2)</td>
<td>= .99</td>
<td>BUSE R(^2) = .99</td>
</tr>
<tr>
<td>Log of likelihood function= -270.57</td>
<td>Log of likelihood function= -250.85</td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: PRIVATE\(_t\)  N=35 (5 panels, 7 periods each)

Notes: Standard errors in parentheses.
*indicates statistic is significant at \(\alpha=.10\).
** indicates statistic is significant at \(\alpha=.05\).
*** indicates statistic is significant at \(\alpha=.01\).
p in the GLS model was estimated using Parks' pooling procedure for panel data.
The constant term captures the effect of the fifth group of orchestras.

heteroskedasticity and autocorrelation within the panels. A method designed to deal
with these specific problems suggested by Parks (1967) is appropriate for these data
and is used to re-estimate the coefficients.\(^5\) The resulting generalized least squares
(GLS) regression effectively neutralizes the problems with heteroskedasticity and
autocorrelation. The results of both the OLS and GLS regressions are presented in
Table 2.

The extraordinarily high R-squared measures do not reflect multicollinearity, but
rather an overall lack of variance in the sample resulting from the fact that each
observation is itself an average across the "raw" data.

The two models are quite consistent with one another, and in terms of the hypothesis
being tested, the results are unambiguous. Both this period's public funds term and
its square are significant at high levels, and they have the predicted signs. Furthermore,
the knee in the curve they imply is within the range of the data used. In other words,
the empirical tests strongly support the nonlinearity hypothesis set forth earlier. Other
significant variables are development expenditures, two of the fixed effects, and the
time trend. The finding that development expenditures positively affect private giving
is not surprising and is consistent with other work done on symphony orchestras
(Brooks, 1997). The significant positive trend indicates autonomous increases in

\(^5\) This method employs a set of assumptions on the disturbance covariance matrix that is cross-sectionally
heteroskedastic and time-wise autoregressive. For more details, see Kmenta (1986, pp. 616–625).
philanthropy over time. This last finding is interesting in that it is not consistent with some recent National Endowment of the Arts (NEA) research (Cobb, 1995) that claims a negative trend in private giving to the arts.

The relationship between government support and private philanthropy measured in the GLS model is charted in Figure 2. Here, the middle group of orchestras is selected (48 orchestras), and all values besides public subsidies and private giving are held at their means. According to this model, the average group 3 orchestra will, ceteris paribus, tend to experience a leveraging effect up to about $8,200 in government support per concert; after this point, private support will begin to be crowded out.

The relation between Figure 2 and the actual data for each orchestra group is summarized in Figure 3. The figure emphasizes that Figure 2 is not an unreasonable extrapolation from the data. In addition to the fact that the curve does not use values far outside the range of data, we see that both crowding out (group 1) and crowding in (groups 2–5) are apparent within the orchestra groups. To demonstrate this, the data in each panel are compared to their values fitted to PUBLIC and the mean values of the other significant variables in Table 2.

It should be noted that the empirical treatment here is not intended to represent the only model of the hypothesized relationship. The approach here was employed primarily to balance simplicity with strength of results. The purpose was to test the central hypothesis, which these models do in a transparent, convincing manner.

![Figure 2. The observed relationship between private donations and public subsidies per concert (fitted values for group 3 orchestras).](image-url)
Figure 3. Group 1 orchestras see crowding out, while the other groups experience crowding in.

Note: Individual observations are indicated with dots, while the lines give their predicted values. Predicted values are made from regressions within individual groups using the mean values of the significant variables in Table 2.

THE SHORT-RUN TRADEOFF AND A "SUBSIDY TRAP"

Having established a convincing case for the hypothesis of nonlinear crowding out, issues of the short- vs. long-run may now be examined. When time and liquidity are considered in the nonprofit firm's (or the government's) problem, an entirely different conclusion may emerge, as a result of the fact that private donors' reactions to a change in the level of subsidies may take time to materialize completely. To show this, the idea of a short-run version of the curve in Figure 1 is introduced, and depicted in Figure 4.

Curve SR is a hypothesized short-run tradeoff curve; LR is the long-run curve in Figure 1. SR is the curve that firms see within a given period, after public subsidies have been received, but before private donors have sufficient time to react fully to this level of subsidies. SR intersects LR at the SR maximum because LR is made up of all of the "best" short-run possibilities. The crowding out reaction of donors being muted before the passage of time, SR will lie outside of LR on either side of its maximum.
Testing the proposition that SR has the shape it does—notably, that it lies off the LR curve at all points besides its maximum—is more difficult than testing the hypothesis in the last section. This is due to the fact that data in most of the nonprofit sector are simply not collected frequently enough to gauge very short-run effects of government spending on private giving. However, a tentative case for this hypothesis can still be made using the symphony orchestra data. This can be done by comparing private support and successive lags in public support. Support of the proposition here would be seen in a finding that the correlation between (the absolute value of) changes in public subsidies and private giving rises somewhat after the initial period, as reaction to subsidies has time to fully materialize (and then later drops off, as would be expected). This is far from perfect evidence of the phenomenon in question, but could be considered suggestive nonetheless.

Table 3 gives the correlation matrix for changes in private giving this period and in public subsidies from this period as well as two prior periods. The first column reflects the pattern in correlations consistent with the short-run tradeoff proposition.

Given this relationship, why would a nonprofit organization or government treat SR as the relevant curve, as opposed to LR? There are two possible reasons: First, the firm could have short-term liquidity problems such that moving up in total revenue over the long run would mean an unaffordable short-run revenue sacrifice. In Figure

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*Note that SR is only defined as the curve drawn in Figure 4 in the event that the firm starts at subsidy level G***; otherwise, it would be facing a different short-run tradeoff curve corresponding to a different starting subsidy level.
Table 3. Correlations between the absolute value of changes in private giving and government support to orchestras.

|       | $|\Delta P|_t$ | $|\Delta G|_t$ | $|\Delta G|_{t-1}$ | $|\Delta G|_{t-2}$ |
|-------|---------|---------|-------------|-------------|
| $|\Delta P|_t$ | 1       | 0.01     | 0.61        | 0.26        |
| $|\Delta G|_t$ | 0.01    | 1        | 0.37        | 0.55        |
| $|\Delta G|_{t-1}$ | 0.61    | 0.37     | 1           | 0.37        |
| $|\Delta G|_{t-2}$ | 0.26    | 0.55     | 0.37        | 1           |

4, note that movement from $G^{***}$ (the short-run maximum) down to $G^{**}$ would lead to increased total unearned revenue over time, but lower revenues in the present period. If the firm were insufficiently liquid to absorb the short-run loss, it would be precluded from moving up LR to higher revenues and remain “stuck” below $TR^{**}$, period after period.

Second, managerial and bureaucratic short-sightedness could play a role in keeping public subsidies at a suboptimally high level. If a decisionmaker’s personal time horizon did not extend to the period corresponding to LR, there would be no reason to make the short-term revenue sacrifice it represented. Similarly, it could be mistakenly believed that SR represented the only set of tradeoffs to be had.

SUMMARY AND IMPLICATIONS FOR POLICY AND MANAGEMENT

The theoretical and empirical literature on the crowding-out question has until now assumed linearity in the relationship between the variables of interest. A puzzle that has emerged in this literature is the inconsistency of findings: In some estimations, government subsidies crowd-in private giving, while in others, donations are crowded out. This paper argues that relaxing the linearity assumption may resolve this puzzle. At low levels of government funding, philanthropy might be encouraged, but beyond a certain point crowding out begins.

Two important conclusions follow from the analysis in this paper. The first involves the incompatibility of a total unearned revenue objective with a private donations objective. The second concerns the existence of the short-run subsidy trap.

The analysis here shows that, under the initial assumptions (which are supported by empirical testing) about the behavior of private donations at different levels of public support for nonprofit firms, the level of subsidies that maximizes donations cannot be coincident with the level of subsidies that maximizes total unearned revenues. To be more specific, the former level will be lower than the latter. As a result of this, if total revenues are at their maximum, the firm will experience crowding out of donations by subsidies.

It is common in policy problems that objectives be in competition, of course (although it is a point often forgotten). However, it is notable when two common managerial objectives cannot be attained even coincidentally. Development directors of nonprofits, who often consider both of the measures discussed here to be targets (however difficult to attain, since government subsidies cannot be directly manipulated), might take special note of this.
This finding has potentially interesting social welfare implications as well. A “benevolent social planner” might choose the total revenue-maximizing level of subsidies to maximize the production of the goods and services produced by the organization, which are arguably generally quasi-public. On the other hand, the planner might prefer the level of subsidies that maximizes private giving, as this effectively devolves decisions about funding these quasi-public goods to individuals and hence is arguably more democratic.

The possibility of a short-run subsidy trap, suggested by the discrepancy between the long-run tradeoff and its short-run corollary, has strong policy and management implications. As has been shown, trouble with liquidity or a misunderstanding of the subsidy–donation tradeoff could lead to the consumption of a suboptimally high level of subsidies by some firms in the long run, which in turn could trap them at levels of total unearned revenues below the maximum. Thus, the inability or unwillingness to forego a relatively small amount of public funds in the current period (in order to stimulate even more in private donations) could represent a significant long-term sacrifice.

Two other policy points bear making. First, even if crowding out is occurring at the margin for orchestras in the aggregate, it still may be that subsidies stimulate giving for individual organizations. Second, government would do well to try and ascertain the degree of crowding in or out across firms and subsectors. In a world of scarce public resources, this information would allow policymakers to reallocate subsidies across the nonprofit sector in a way that uses these funds most efficiently.

Certain types of nonprofit firms should be especially prone to the subsidy trap. First, there is the firm that has relatively high levels of government subsidization, and year-to-year trouble with liquidity, such that a small decrease in these subsidies would jeopardize the firm’s immediate ability to cover its operating costs. Second, there is the government-subsidized firm that has traditionally paid little attention to private donations.

How might a firm be lifted out of a short-run subsidy trap? In light of the analysis reported in this paper, the answer to this question is not more government aid. If a larger subsidy were used to increase the nonprofit’s short-term liquidity, the firm’s total unearned revenues—both short-term and long-term—would fall. Therefore, the solution to this trap lies either in an exogenous increase in philanthropy or increased funds from another source, such as earned revenues (which were not found in the empirical model to significantly affect private giving).

In the case of a firm in a short-run subsidy trap, cognizance of the futility of greater public subsidies would be very valuable for managers and policymakers. For instance, limited resources for promotion and development might not be squandered on lobbying as opposed to, say, commercial expansion. And the existence of the trap as well as the futility of greater government funding might be useful to convey to potential donors. An explicit appeal to donors to “invest” in a firm in the present to allow it the liquidity to accept a (lower) level of government funding (associated in the long run with higher private giving) might be an effective fund-raising strategy.

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REFERENCES


