OXFORD

Article

Government Grants, Donors, and Nonprofit Performance

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Abstract

Nonprofits engaged in public service provision can receive funding from both donors and governments. Much of the nonprofit performance theory suggests that donors are unlikely to base donation decisions on nonprofit production. However, governments may prioritize performance in nonprofit funding decisions. We combine study internal production reports for the years 2010–2016 from 535 Habitat for Humanity Affiliates with financial data from IRS Form 990 reports and housing price data from the FHA. We then use a dynamic panel design to compare the effects of performance on donor and government funding. Production does not increase donations, but a 1% increase in production increases government grant revenue by 0.28%. Our findings indicate that nonprofit performance theory should move beyond the donor-nonprofit dyad and explicitly explore the role of government principals. Our findings also suggest that while requirements that accompany government funding might be cumbersome for nonprofits, government entities might use the data in future grant decisions.

Introduction

Standard economic theories of nonprofits, as well as some of the recent scholarship challenging fundamental notions of nonprofit performance theory, argue that the inability and unwillingness of donors to respond to nonprofit performance is fundamental to relevant theories of nonprofit institutional design (Mitchell and Calabrese 2020). Standard "theories of the firm" from the economic organization literature treat nonprofits as agents of donor principles uniquely unable or unwilling to monitor nonprofit performance. However, nonprofits have agency beyond donor impetus and frequently seek out and receive government revenue.

Unlike donors, governments often look to monitor the performance of the organizations they fund (Poister 2008). Economic theories of nonprofit management focus heavily on the donor-nonprofit dyad and say little about government responsiveness to performance. While donors optimizing warm glow might have

limited incentive to respond to nonprofit performance (Andreoni 1990), governments looking to nonprofits as a vehicle for critical social production may be more likely than donors to reward nonprofit performance for two reasons. First, governments might be more likely to require nonprofits to report their performance as a condition of receiving funding. Second, government principals are self-contained hierarchies with lower coordination costs for monitoring performance than independent donors.

This study uses rare production data from internal nonprofit reports and a dynamic panel econometric approach to examine the degree to which increases in nonprofit performance affect funding through government grants. In this paper, we first develop the information costs and incentives that donors and governments face in observing performance. We then develop the data, empirical model, and analysis approach. Finally, we explore the findings and put forth implications and

conclusions regarding the distinct role of government in nonprofit performance theory.

Information Costs and Nonprofit Performance

Donors, Information Costs, and Nonprofits

The relationship between donors and nonprofits is central to how nonprofit performance is theorized. Nonprofits can have many different goals and missions, from policy advocacy to social membership groups to religious organizations. For nonprofits whose primary mission is the production of goods and services for consumption (e.g., meals, housing for the economically insecure, hours of legal support for indigent defendants), much of the classic nonprofit performance theory lies in the economic organization literature. This theory is rooted in the presence of market frictions: social production left to clearing private markets will underproduce certain goods and services or otherwise might produce them at a price point out of reach for large segments of the market for which there is still much need. Governments can theoretically produce these critical goods and services via public agencies, but significant disagreement about what and how much to produce in the political process can impair their production.

Thus, philanthropists, as members of society who wish to ensure the production of these goods and services, donate to nonprofits. All means of production are embedded with market frictions, and inherent to the nonprofit production of consumable social goods is a problem where donors can have trouble observing nonprofit performance (i.e., production of the goods and services they fund). This transaction cost is common since donors (as taxpayers) would have similar difficulty observing public (due to the unpredictable political process) or proprietary (due to probity hazards like cutting corners for profit or simply not producing the goods at all) provisions of critical goods. In the organizational economics literature, donors fund nonprofits because they are the least transactionally costly vector to do so: missing profit motives and political processes mean they can trust the organizations to produce the goods and services that the market cannot (Smith and Lipsky 2009; Weisbrod 1986).

Donors, mostly unable to observe outputs, then optimize warm glow in their donation decisions: nonprofits receive donations when they best appeal to the positive feelings they can elicit from the donor (Andreoni 1990; Hansmann 1981, 1987; Rose-Ackerman 1996). Optimizing warm glow and observing performance are not necessarily mutually exclusive: there is a market for nonprofit performance information (Yörük 2016), and the continued donor emphasis on overhead costs might represent an attempt to observe performance, even if doing so means relying on poor proxies for performance (Coupet and Berrett 2019; Lecy and Searing 2015). When donors do seek valid observations of nonprofit performance to guide donation decisions, they can face a number of information costs.

Mitchell and Calabrese (2020) argue that the presence of major information costs on the part of both donors and nonprofits means that donors are unlikely to respond to performance at all, and they also argue that several key information asymmetries are present. On the demand side, donors face three major information costs. First, search and discovery costs can make it difficult for donors to identify sought-after nonprofits and observe both their costs and outcomes. Second, bargaining and decision-making costs can make it difficult for them to compare nonprofits and to use outcome information to make decisions. Third, surveillance costs can make it transactionally (and financially) expensive to ensure the veracity of nonprofit outcome data and to enforce any rules to ensure the data are useful.

Nonprofits themselves face information costs in observing and sharing their performance. First, they face distortion costs. It is difficult to measure nonprofit performance with enough precision to be useful, and if nonprofits map strategy to poorly measured performance, they can waste resources and impede outcomes. Second, they face direct (staff, time, equipment) and indirect (opportunity costs, coordination costs) evaluation costs, and funding to measure performance can be difficult to obtain (Lee 2019). Third, they face disclosure costs related to sharing outcomes with donors, as finding an efficient and clear way to communicate performance to donors can be difficult. Fourth, nonprofits face auditing costs. Performance can be measured sloppily, and an emphasis on performance can incentivize inflated performance measures within a hierarchy. In addition, auditing the accuracy of nonprofit performance measurement is transactionally expensive.

These costs laid out by Mitchell and Calabrese (2020), as well as by the original assumptions of the standard economic theory of nonprofits, suggest donors are unlikely to shift funding based on nonprofit performance. There is some empirical evidence that this is true on both the donor and nonprofit sides. On the donor side, recent findings indicate that successful nonprofits sometimes receive the fewest donations and donors are unlikely to observe success or performance (Charles and Kim 2016, Grizzle 2015). Donors sometimes respond to crude (but observable) financial ratios (Charles 2018), but these ratios are generally poor measures of performance (Coupet and Berrett 2019; Mitchell and Calabrese 2020).

On the nonprofit side, distortion costs are real in that nonprofits can struggle to link performance measurement to performance improvement (Carnochan et al. 2014). Low capacity can restrict a nonprofit's ability to measure performance since the operational costs can be so high (Lee and Clerkin 2017). There is little evidence that donors are willing to, or can, base donations on valid measures of nonprofit performance (Charles and Kim 2016).

Most of the theories highlighting the performance information frictions between donors and nonprofits are framed with individual, uncoordinated donors. Large foundations and corporations, as coordinated hierarchies, might be more likely to design and implement performance management systems to link performance to future donations (Macindoe & Barman 2013; Marshall and Suarez 2014). From this we might infer that the performance-funding link might be more frictionless when that funding comes from donors within a hierarchy than "disorganized" individual donors since the hierarchy itself can set up and maintain a system that links performance to funding (Froelich 1999).

These coordinated hierarchies often give for strategic reasons other than performance, including corporate risk mitigation (Bhattacharya et al. 2020), competitive advantage (McWilliams and Siegel 2011), or to influence public policy (Coule, Dodge, and Eikenberry 2020). Lefebvre and Thomas (2017), for example, discuss how educational nonprofits' influence on public discourse and policy can help maintain strong philanthropic support from large foundations despite poor performance. Finley et al. (2020) have found that while corporate donors seek to implement performance management systems, nonprofits reliant on revenue from large foundations are more likely to cater to nonperformance-related conditions (i.e., warm glow).

Government Funding, Information Costs, and Nonprofits

The relationship between government and nonprofit activities can be quite nuanced, and performance management in these cross-sector arrangements can be murky and difficult to disentangle (Lecy and Van Slyke 2012). Still, arguments can be made that governments are more motivated to observe and use nonprofit performance than donors. First, governments might incur fewer costs in observing performance than donors. While disclosure costs are present in all transactions involving the exchange of information, they might be lower in government-nonprofit performance information exchanges. Governments typically require some reporting of performance as a condition of receiving government funding (Feiock and Jang 2009). Thus,

they can set conditions dictating the terms of information disclosure that minimize the costs they face, even if it imposes further transaction costs on the nonprofits, like goal displacement and the de-professionalization of staff (Alexander, Nank, and Stivers 1999; Marwell and Calabrese 2014; Peng and Lu 2020; Pettijohn and Boris 2014).

Second, while a singular, or very concentrated set of donors, can set and enforce conditions of performance disclosure, large nonprofits can have donor portfolios that consist of many types of donors (small and large) with different outcome preferences, reasons for giving, and abilities to observe outcomes, making coordination costs too substantial to agree on a set of performance criteria and a mechanism by which to disclose it.[1] Government, as a legally coordinated hierarchy, can set these terms as part of performance management systems.[2] The requirements of government funding can serve as the backbone of nonprofit performance management systems, even if the system feels internally awkward for the nonprofit (Kim, Charles, and Pettijohn 2019). In some cases, government funding is the only reason nonprofits collect performance data at all (Lee 2017).

Governments might also have more incentive to observe performance than donors do. Governments sometimes directly contract with nonprofits, either to achieve optimal outcomes (Fitzgerald et al. 2019; Young 2000) or because of public pressure (Van Slyke 2003). For example, constituents can blame governments for the poor performance of nonprofits they fund, causing governments to fund high-performing nonprofits to protect their reputation (Van Slyke and Roch 2004). Many government-funded nonprofit endeavors are directly intended to improve performance and include formal mechanisms to regularly monitor outcomes as a condition of funding (Carman 2009; Frumkin 2001).

Further, for many government platforms, performance management is an institution (Moynihan and Pandey 2010). Performance measurement and performance information use can be part of core, rote operational processes that accompany all externally

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1 This argument is similar to the one made in public choice theory regarding rational nonvoters. Coordination costs are too high across a donor pool with low concentration. So, collectively, donors can lack the market power to demand performance (see Milgrom and Roberts 1991 for a thorough discussion). Ironically, these same public choice models have been used to note the infeasibility of public performance management: too many voters with too little power with too high coordination costs. Yet the public performance literature is vast, as end users of public services can observe poor performance and be a vocal, powerful political force in ways that donors cannot.

2 Coordination of performance information and its use within a hierarchy can be substantially more complicated. See Kroll (2015) and Moynihan and Lavertu (2012).

extended resources and many internal ones (Kroll 2015). Even if the impetus for nonprofit funding was not to "buy" production from the nonprofit sector, rote systems of performance management in government organizations might make it more likely that output and/or outcomes measures are required as a condition of funding and that these outputs are used for funding decisions in some way. In fact, Carman (2009) finds that that the *only* nonprofits actively engaged in performance management were ones that received substantial amounts of government funding.

Governments might also incur some disincentive to monitor nonprofit performance. Some of the impetus for the funding of nonprofit social production can often result from public or political pressure (Van Slyke 2006). Sometimes this political pressure to fund nonprofit organizations engaged in the production of critical goods and services is unrelated to axioms about superior cost and performance, such as the strong and growing push in many areas for governments to fund private religious schools (Parker-Jenkins, Hartas, and Irving 2019). In such cases, funding to nonprofits is less about superior performance, as in Young's (2000) complimentary case, and more about political constituents' designation of a cause worthy of government transfer payment. In these cases, there seems to be little reason to either observe performance or base funding on performance.

Still, governments likely face some information costs in monitoring nonprofit performance. The internal costs in monitoring and sharing performance for nonprofits internally would seem to apply to governments too (distortion, evaluation, disclosure, auditing costs). Governments are more likely to fund external organizations that they can easily monitor (Brown and Potoski 2004), but complex social production can be harder to evaluate and can leave room for opportunistic behavior (Brown, Potoski, and Van Slyke 2015). A perceived lower incentive for opportunistic behavior can mean nonprofits might be more likely to receive government funding to produce complex goods and services, and performance in these sectors can be very difficult to measure by definition (Eggleston and Zeckhauser 2002; Warner and Hefetz 2012). Further, shrinking government capacity can impede the ability of governments to monitor nonprofit performance (Kelman 2002; Van Slyke 2003), increasing discovery and bargaining costs.

Navigating the reporting requirements accompanying government funding can be cumbersome for nonprofits (Pettijohn and Boris 2014). Government funding can also sometimes crowd out other funding sources, although the jury is certainly still out (de Wit and Bekkers 2016; Jilke et al. 2019). Still, the performance management that accompanies government funding is unlikely to impede nonprofit performance (Coupet 2018). In some cases, government funding can boost nonprofit performance since they help build the capacity to connect performance to decisions (Coupet 2017).

In short, there is little reason to believe that nonprofit performance will predict donations. On the contrary, while governments face significant impediments to observing nonprofit performance, there is reason to believe that nonprofit performance might predict government funding more than donations. In the next sections, we empirically measure the degree to which nonprofit performance predicts donor and government funding.

Data, Model, and Method

This section walks through the data, model, and methodological approach of the study.

Data

Our sample mostly comes from Habitat for Humanity (HFH), an international nonprofit organization with the primary mission of building houses for consumption by disadvantaged families. For decades, the nonprofit did not accept government funding and moved to the limited acceptance of government funds in 1996. In 2001, HFH substantially deepened its revenue streams from government, both from federal and local governments. To maximize independence, HFH affiliates mostly accept government grants and subsidies for property acquisition and related costs, eschewing most direct contractual arrangements:

> Habitat does accept government funds for the acquisition of land or houses in need of rehabilitation. Habitat also accepts government funds for streets, utilities, and administrative expenses, so long as the funds have no strings attached that would limit its ability to build each Habitat house as a demonstration of God's love." (Habitat for Humanity 2020)

HFH avoids government funding with "strings attached," but the impact of government performance management systems is visible for HFH. In 2014, the US Department of Housing and Urban Development (HUD) awarded more than $4.2 million across more than 30 HFH affiliates. Each affiliate must compete annually for federal funds (Habitat for Humanity 2020), and they must show evidence of past production and commit to increasing production by more than 15% over three years. Direct reporting of production is required to receive a grant.[3]

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3 Cohen (2011) describes the impact of performance management on HFH in detail.

The performance reporting requirements have led to some affiliates eschewing government funding altogether, but HFH affiliates enjoy much independence, and many other affiliates see the performance at HFH as an advantage. One affiliate director noted the government's emphasis on performance: "we'll do it faster, better, and cheaper than any and all other programs because of the great leveraging ability we have to utilize volunteers and other funds" (Cohen 2011). Therefore the performance emphasis of government seems to play a role in HFH operations.

Our study is based on an analysis of 535 HFH affiliates across the United States. We developed a unique dataset by combining data from three sources—HFH production report, IRS Form 990, and the Federal Housing Authority (FHA)—for the years 2010–2016. Performance data come from HFH's production report, and organizational data come from IRS 990 data.[4] Housing market data are from the FHA (see a summary of the data in Table 1). Financial variables related to HFH affiliates were taken from the IRS Form 990, and these data are among the most widely used in nonprofit management. We gathered Form 990 data for HFH affiliates required to file in full, inclusive of affiliates with more than $50,000 in revenue.

The HFH production report includes 1,395 affiliate organizations. When we obtained the functional expenses from GuideStar, we removed affiliates because 1) they could not be identified in GuideStar, 2) their 990 for the necessary year was not on file, 3) they completed the 990 EZ, or 4) they misreported financial information. This process reduced the sample down to 685 organizations and we then removed affiliates with no home production of any kind as well as affiliates in zip codes without federal housing market data. We also removed two more affiliates with suspected poor data[5].

The smaller sample we analyze is different than our sampling frame in two major ways. First, the affiliates in our sample receive government grants, and the ways they are different than affiliates that do not use governments grants probably have an unobservable dimension. Our analysis (and resulting inference) extends only to affiliates that use government grants. Second, the affiliates we remove are much smaller. This is expected since affiliates below the filing threshold have much smaller operations on average than those that file. It also appears that the affiliates that do not receive government grants are smaller on average than those that do. The means of each of our key variables are approximately half of those in the sample. Like much of the research situated in constructs from the Form 990,

our analysis and resulting inference applies mostly to larger nonprofit operations.

HFH counts four outputs: new houses, recycled houses, rehabilitated houses, and repaired houses. New homes outputs are newly constructed homes, while recycled homes are houses that an affiliate has foreclosed on (or received a deed in lieu of foreclosure) and have then been rehabbed and made available for sale once again to another HFH homebuyer. Rehabilitated homes have been donated to or bought by HFH, have been fully rehabbed, and are sold to a qualified HFH homebuyer. Repaired homes represent the spectrum of possible repairs from critical repairs, like new roofs and electrical systems to painting or remediation of mold and mildew.

Model

This study puts forth two tests. We first measure the effect of nonprofit performance on the donations that nonprofits receive (Model 1), and we posit that donations are a function of performance, fundraising expenditures, and past donations. We then measure the effect of nonprofit performance on government funding (Model 2), and we posit that government grants are a function of performance and past government grants. In addition to performance, the we posit that donations depend on what each nonprofit spends on fundraising and on a set of time-invariant organizational controls (Z) present in both Models 1 and 2 (Equations 1.1 and 1.2).

Equation 1.1

$$Donations_t = F(Performance_{t-1}, Fundraising\ Expenditures_{t-1}, Z)$$

Equation 1.2

$$Government\ Grants_t = F(Performance_{t-1}, Government\ Grants_{t-1}, Z).$$

In Model 1, the dependent variable of interest is the amount of charitable donations at year-end. The charitable donations construct is derived from IRS Form 990, Part VIII Line H.[6] In its derivation, the amount of government-based revenue (the dependent variable of interest in Model 2) was subtracted from the total contributions since the IRS Form 990 includes government grants in its calculation of total contributions. This term was also lagged in the model as an independent variable. Donations today, empirically, are likely to be predictors of donations in the future. This term also serves as a control for time-invariant organizational factors like leadership, resources, and capabilities that impact fundraising. Using a lagged

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4 IRS 990 data were compiled by GuideStar in 2018.

5 Relevant data files can be found at https://github.com/Jcoupet/Government-Grants-Nonprofit-Performance

6 https://www.irs.gov/pub/irs-pdf/f990.pdf

Table 1. Summary of Data

Variables	Mean	Std. Dev.	Min.	Max.
Total Output	9.42	23.91	1.00	622.00
New	3.68	8.13	0.00	196.00
Recycle	0.36	1.27	0.00	28.00
Rehab	0.98	4.97	0.00	196.00
Repair	4.40	17.49	0.00	443.00
Total Contributions	$652,487.00	$1,414,758.00	$190.00	$27,500,000.00
Fundraising Spending	$70,403.63	$155,127.70	$5.00	$2,404,447.00
Government Grants	$109,162.70	$567,452.10	$3,940.00	$19,200,000.00

independent variable works well as a fixed effect in this case because strategic capabilities take time to develop and are less prone to the kinds of shocks that would compromise the observed results (Cameron and Trivedi 2005).

Model 2 is similarly structured but instead predicts government grants (the dependent variable) with nonprofit performance. Our government grants construct comes from IRS Form 990, Part VIII Line E. The measure is the report of the total amount of government grants received. Much of the government funding to HFH comes via the HUD,[7] allowing HFH affiliates to apply for supplemental federal funding for building expenses, provided they meet certain criteria.

Like other studies using government funding constructs derived from IRS Form 990 (Carroll and Stater 2009; Lecy and Van Slyke 2012), our measure for government grants includes only what the nonprofits in our sample list as government contracts. Further, because nonprofits sometimes use government grants to supplement programs they run, there is a chance that some government grants might be captured instead as program revenues. As a check to the construct validity of our *Government Grants* dependent variable, we performed the following robustness check. On Form 990, most of our sample listed up to six program revenue sources (A-F) and the amounts listed. We cataloged each listed source of program revenue to ascertain the degree to which they were sourced in government grants, then investigated each source on the web. To include government revenue, we then listed each program revenue source as either "government sourced," "not enough information," or "unlikely to be government sourced."

Our robustness check found that of the listed program revenues for each nonprofit in our sample, 0.27% of listed program revenues appear to be sourced in government grants. When we included the "not enough information" category[8], this number rose to 0.29%. Most program revenues seem to consist of mortgage amortization and Habitat Restore Sales.[9] Blank entries by affiliates could not be checked, and the kind of government contracts noted in Kerlin and Pollak (2011) could possibly be found in the program service revenue construct. A detailed expository of this robustness check, including the code sources, categorizations, and triangulated sources, is available in the Supplementary Appendix.

Still, IRS 990 data is not formally audited and is therefore subject to the same limitations as any unaudited self-report remitted to a federal agency. IRS Form 990 data can be somewhat noisy (Qu, Steinberg, and Burger 2020) which can complicate statistical inference when appropriate specification is absent (Tinkelman and Neely 2011). This extends to how government funding is categorized (Thornton and Lecy, 2015). Our study emphasizes government grants, but government support can take on other dimensions that are difficult to tease out in classic constructs derived from the IRS Form 990. We caution readers that our constructs and robustness checks do not capture *all* of the instruments of government funding, especially direct funding for programs not categorized as a grant or contract.

Method

The assumptions of standard regression models are often violated in nonprofit management research (Hughes 2006). We use a dynamic panel model to account for the omitted variable bias and endogeneity issues standard regression models may pose. It is tempting to include, as controls, values of financial and organizational variables correlated with donations, but multicollinearity in the organizational literature is a serious problem (Shearer and Clark 2016). The approach of the dynamic panel model is intended to remove the variance from time-invariant correlates. Therefore, we posit that many of the expected controls

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7 https://www.habitat.org/newsroom/06-22-2011-hfh-receives-15.3-million-hud-grant

8 Coding was performed by two researchers as an interrater reliability check.

9 HFH appears to derive significant revenue from mortgage amortization and payment and Restore Sales, a commercial program offering donated items for sale to the general public.

in our models are controlled for but are not visible individually in the model. The model does include year fixed effects to account for time-related policy shocks, particularly in post-recessionary periods.

Another potential source of endogeneity in this study's model is that government grants in our sample could largely be a function of variance in time-variant environmental conditions correlated with HFH production. To adjust our models for the potentially confounding effects of these environmental conditions, we instrument with a House Price Index (HPI) derived from the FHA. We posit that changes in funding to HFH affiliates, by either nonprofits or governments, are correlated with changes in housing market conditions that HFH is also responding to.

Total Production

The key performance measure this study uses is the total output of HFH production. We measure observable outcomes with total outputs, which we construct as an additive measure comprised of the sum of each of the produced HFH outputs.

Fundraising Expenditures

Nonprofits spend on fundraising infrastructure for the express purpose of increasing donations, and there is ample evidence to support this (Andreoni and Payne 2011; Weisbrod and Dominguez 1986). The specific measure we rely on is a measure of total reported donations at the end of the year.

Fixed Effects and Endogeneity

Many factors can impact nonprofit donations that are relatively constant over time and impair the consistency of estimates by introducing endogeneity (Karlan and Wood 2017). With panel analysis, ordinary regressions do not model time well and are prone to omitted variable bias and selection bias, and unobserved variables can influence the results and the inference made from them (Ba, Berrett and Coupet 2021; Cameron and Trivedi 2005). These variables include several constructs related to donor characteristics like race, age, altruism, and religion (for a good review, see Bekkers and Wiepking 2011). Rather than attempt to control individually for each of these, we take advantage of the dynamic panel approach (Marwell and Calabrese 2014).

We use the AB approach, which first differences the dependent and independent variables to account for fixed effects. In our study, these are largely organizational variables that count for the omitted variable bias stemming from unobservable characteristics that would bias our effect of interest. To address correlation between the lagged dependent variable and the error term, the AB approach uses lags of the dependent and

independent variables as instrumental variables, beginning with the $t–2$ period since it is uncorrelated with the error term, using all available lags as instruments.

Our approach generally matches that used in dynamic panel public management designs (Veronesi, Kirkpatrick, and Altanlar 2019; Zhu 2012). Our specific empirical model is represented in Equations 2.1–2.4. In our approach, all variables are in logs, and we lag the key dependent funding variable as an independent variable. We also lag the key independent variables on the right-hand side, by one period, to assert strict temporal precedence.

Equation 2.1

$$\Delta \ln(Donations)_t = \infty + \beta_1 \Delta \ln(Donations)_{t-1}$$
$$+ \beta_2 \Delta \ln(Houses)_{t-1}$$
$$+ \beta_3 \Delta \ln(Fundraising\ Expenses)_{t-1} + \varepsilon.$$

Equation 2.2

$$\Delta \ln(Government\ Grants)_t = \infty + \beta_1 \Delta \ln(Government\ Grants)_{t-1}$$
$$+ \beta_2 \Delta \ln(Houses)_{t-1} + \varepsilon,$$

where the lagged dependent variable (*Donations* and *Government Grants*, respectively) (is instrumented by past values. Robustness checks include tests for the orthogonality of the $t–2$ period in the differenced equation as well as Hansen statistics for each model. To be considered acceptable instruments, the $t–2$ error term should be uncorrelated with the residuals at time t. Specifically, for all periods j,

Equation 2.3

$$\Delta \ln(Government\ Grants)_{t-1} = \beta_1 \ln(Government\ Grants)_{t-2} + \ldots$$
$$+ \beta_2 \ln(Government\ Grants)_{t-j} + u$$

Other unobservable factors that change over time might potentially bias estimates. To address these confounding effects, we instrument with the HPI of each Habitat affiliate's zip code. The HPI is composed by the FHA as an indicator of the price level of each zip code. We use changes to model changes in HFH production. Increases in the HPI should reflect increased housing demand, which should increase HFH production.

Testing the validity of individual instruments in AB models is not straightforward. Valid instruments should be correlated with the endogenous independent variable but be uncorrelated independently with the dependent variable. With a series of fixed effects regressions, we find high correlations between the HPI and total production but no independent correlation between the HPI and government funding. We then compose a two-stage model with organizational-level fixed effects such that government grants are a unction of lagged government grants and lagged Habitat production, similar to Equation 2.2. We instrument HFH

production with the lagged version of HPI and test the validity of the instrument with a Hansen-Sargan test. The Hansen-Sargan statistic is well within the acceptable range,[10] and the HPI appears to be a valid instrument.

AB approaches already include a series of instrumented-level values of the dependent variable, so we simply add more instruments to the equation containing those instruments. Specifically,

Equation 2.4

$$\Delta \ln (Government\ Grants)_{t-1} = \beta_1 \ln (Government\ Grants)_{t-2} + \ldots$$
$$+ \beta_2 \ln (Government\ Grants)_{t-j}$$
$$+ \beta_3 HPI_{t-2} + u$$

Specification tests for the AB model test the validity of instruments collectively. Our Hansen statistics are within acceptable ranges and are reported in Table 2.

Results

Government funding in our sample appears to be more sensitive than donated funds to production-based measures of nonprofit performance. Our results suggest that governments perhaps do not face the same sets of incentives and information costs as donors and emerging generalized theories of nonprofit performance should be decomposed based on revenue sources and the principal's incentives.

Specifically, on the donor side, a 1% increase in housing production results in a 0.08% increase in donations, but the effect is mostly indistinguishable from zero and statistically insignificant. Increasing spending on fundraising increases donations to nonprofits (0.25%), reinforcing other studies that suggest fundraising practices matter more than what organizations spend.

The results are quite different when comparing the responsiveness of government grants to performance (see Figure 1). Government grants are more sensitive to performance than donors: a 1% increase in performance tends to increase donations by about 0.28%.

Implications

This study's findings suggest that nonprofit performance theory should work to determine how performance management implications might differ based on funding sources. So much of nonprofit management performance theory assumes donor principals.

Government principals perhaps behave differently than donors, and nonprofit performance theory should perhaps be formulated differently. There may be no one-size-fits-all approaches to nonprofit performance theory, and future scholarship may need to tailor theoretical advances to different principals.

According to the organizational economics literature in which the standard theory is based, donor inability/unwillingness to observe performance can lead to opportunism and probity hazards (Coupet and McWilliams, 2017; Eisenhardt 1989). Mitchell and Calabrese (2018, 2020) are rightly concerned about what this means for the implications and fundamental assumptions of the nonprofit sector. They cite dissatisfaction with the nonprofit sector in production of social goods because of social frustration with donor inability or unwillingness to observe performance.

The results of this study might lead one to wonder about how much these concerns, such as overuse of financial ratios (Prentice 2015) and tax sheltering (Heist and Vance-McMullen 2019), should be focused on the donor-nonprofit dyad as opposed to nonprofit performance in general. If other studies continue to suggest that, for instance, governments tend to reward performance, then perhaps the government-nonprofit dyad is more "frictionless" than the donor-nonprofit dyad, at least as far as performance is concerned.

With regard to performance, Mitchell and Calabrese (2020) present three major arguments about transaction costs that define the donor-nonprofit dyad: 1) it is difficult for nonprofits to observe and communicate performance, 2) it is difficult for donors to observe nonprofit performance, and 3) donors care more about feeling good than nonprofit performance anyway. The results of this study, while they should certainly be replicated, provide some empirical context to these arguments. In our sample, the flow of funding to nonprofits, as a function of performance, seems to be less about nonprofits being able to measure performance (if they have capacity, which government funding may help provide) and more about donor ability or willingness to observe it.

That private donors are at a disadvantage as principals, a feature of the institutional economics literature school, is also underwritten by the prevalence of popular third-party organizations that organize financial and performance data from nonprofits for use by donors (e.g., Charity Navigator and GuideStar). But much of this information is poorly designed for decision-making, embodying the bargaining costs that donors face in using this information for decision-making (Lecy and Searing 2015). Dissatisfaction with these third-party structures has led to disruption by social entrepreneurs looking to reduce the information costs donors face (New York

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10 The coefficient of the key variable of interest, the lagged HFH production variable, also closely matched our result from the AB model. The coefficient of the lagged DV on the right-hand side (government grants) was badly biased. This is known as Nickell bias and validated our use of the dynamic panel approach.

Times 2019). But these new structures have received significant pushback from nonprofits themselves. The notion that donor transaction costs can be absorbed by introducing another hierarchy implies the transaction cost associated with the new structure are less than the ones faced by donors. The effects of this disruption on information costs would be a fruitful area for new inquiry.

Governments could not respond to nonprofit performance without being able to observe it, meaning that in this sample, nonprofits observe their own performance, share it with governments, and do so with few enough frictions that governments can respond to it. It also means that government funding might be worth the costs incurred in measuring and sharing performance for nonprofits, who would otherwise decline such funding for other revenue sources with lower opportunity costs.

It is no surprise, then, that our results indicate an empirical responsiveness of government funding to production. HUD is a public hierarchy, and public hierarchies have long been coordinating performance management systems for grants and contracts they dole out (Poister 2008). They do not have the same coordination costs that donors do, especially when there are many of them (see Figure 2). However, governments still face transaction costs in observing performance (C_G in Figure 2), for example, auditing costs.

Table 2. Effect of Performance on Donations and Grants

Variables	Donors	Government Grants
Donations$_{t-1}$	0.55**	
	(0.0795)	
Government Grants$_{t-1}$	0.00	0.49**
		(0.060)
		0.00
Total Houses$_{t-1}$	0.08	0.28**
	(0.04)	(0.08)
	0.06	0.00
Fundraising Expenses$_{t-1}$	0.25**	
	(0.04)	
	0.00	
Constant	3.02**	5.45**
	(0.89)	(0.66)
	0.00	0.00
Observations	1,124	1,246
Number of Affiliates	324	362
Year Fixed Effects	Yes	Yes
Hansen Test (*P*-value)	0.166	0.0792
F-Stat	68.56	22.74

Robust standard errors are in parentheses. *P*-values are in italics. All variables are in logs and were lagged one year.
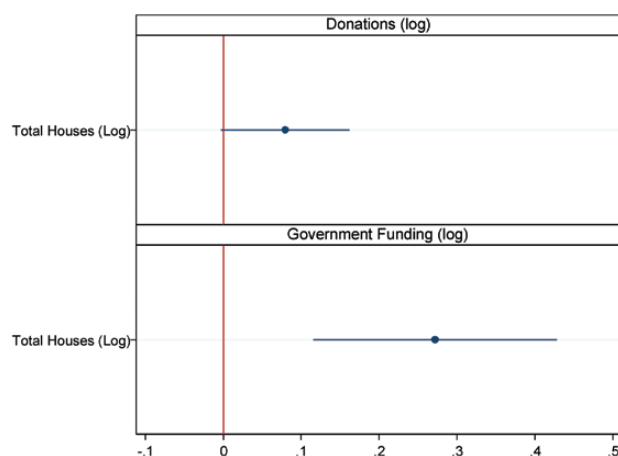** $p < 0.01$, * $p < 0.05$

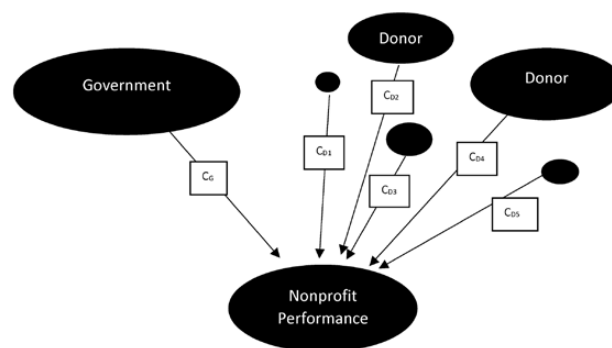**Figure 1.** Effect of Total Production on Funding.

Figure 2. Donor-Government Transaction Costs.

Nonprofits can incur annoying costs associated with collecting and sharing performance data with governments (Pettijohn and Boris 2014), such as overwhelming paperwork and struggling to find the capacity to manage the performance reporting demands associated with government funding (Lee and Clerkin 2017; Pettijohn and Boris 2014). In donor-nonprofit relationships, it might be prohibitively costly to coordinate many (often hundreds) of donors to agree to a performance system and to agree on the terms upon which their donations vary with performance. Each donor, assuming they want to observe performance, is then faced with a set of transaction costs (C_{D1}–C_{DN} in Figure 4, where N is the number of donors). Foundations, as hierarchies outside of the donor-nonprofit "market," likely face lower information costs than donors. However, facing an external environment composed of hierarchical and individual donors, we expect the average effects (measured in this paper) to reflect significant information costs. The sum of these transaction costs defines the government-nonprofit dyad, and our results suggest (but do not test directly) that $C_G < \Sigma^i_N C_{DN}$, or that governments have an easier time observing and acting upon nonprofit performance than donors do.

In short, pending scholarship measuring the relative transaction costs across dyads, this study's results are early indicators that nonprofit performance theory should be sufficiently nuanced to consider how differently performance can matter in the government-nonprofit relationship than in the donor-nonprofit relationship. Organization economics is a useful frame for distinguishing between the two relationships because it allows the particular transaction costs embedded in each dyad to form lynchpins of the theories distinguishing them. Nonprofit performance theory is developing, but the role of government in monitoring and reacting to nonprofit performance should play a prominent role.

It is also important to note that governments are not the only principals, in a classic sense, that should be considered and are perhaps considered differently than donors. Nonprofits can earn income from customers, and donors are a large category of funding sources that can probably be meaningfully disaggregated. For example, the "size" of the donors associated with C_{D2} and C_{D4} might mitigate their associated frictions in measuring, and responding to, the performance of the nonprofits they fund by tying performance management systems to large gifts.[11] This, however, assumes that foundations and large donors are meaningfully interested in performance instead of the warm glow

accompanying the other strategic and political benefits of their gifts.

Still, the major focus of this study is the responsiveness of government grants to nonprofit performance. Government grants might be disaggregated as well. The distribution of government funding by level (local, state, federal) is impossible to tell from the data made available in this study. We notice differences between donors and government, but pulling these rather broad categories apart might provide useful context to nonprofit performance theory. Our findings could also be picking up average effects. Disaggregation might tease out meaningful distinctions between large foundations and individual donors as well as between local and national level governments.

Another important potential takeaway involves the nature of government funding to nonprofits. The nonprofit literature is clear that the requirements that accompany government funding can be quite a nuisance for nonprofits, involving large amounts of paperwork and performance reporting (Pettijohn and Boris 2014). This notion is robust to HFH affiliates who, as we note earlier, can also find the performance management requirements cumbersome. But these findings suggest that governments might actually *use* these data in future funding decisions. Again, performance theory in the nonprofit management context might benefit much from reframing of performance management requirements as cumbersome for nonprofits to legitimate formal performance management systems that governments use. Theory building about optimizing these performance systems for government funders and nonprofits would be useful.

Of course, all of this assumes that the nonprofit relationship with governments and donors fits a principal-agent mold. This is not always a good assumption (Gazley and Brudney 2007) but is reasonable for nonprofit performance theory (Carman, 2009). In the case of donors, Andreoni (1990) makes it pretty clear: donors buy warm glow from nonprofits based on the production of goods for those in need. They cannot observe the provision of these goods and services well, but the nonprofit nature of the hierarchy allows donors to trust that the goods and services are provided. In the case of government, the principal-agent relationship is reasonable here too. Amid shrinking investment in the production and maintenance of public housing and funding for housing insecurity, governments instead fund nonprofits like HFH. Much of the housing produced by HFH is for families that would otherwise have qualified for public housing (Habitat for Humanity 2020).

This study does not test for the presence of the costs (C_{D1}–C_{DN} in Figure 4) that Mitchell and Calabrese (2020) and others describe, although future scholarship

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11 If these systems are well designed, there is little evidence that they actually are.

endeavors to do so would likely make interesting contributions. There is good evidence that many of these costs are real, and the dominance of the organizational economics frameworks in performance management systems gives solid ground upon which this study is based. But donors give for many reasons including legitimacy, trust, reputation, culture, family history, and prestige (Harbaugh 1998). The organizational economics literature is sort of limited in that it captures all of this as warm glow: nonperformance-based reasons for giving that optimize donor utility. Which of these reasons guide donor giving in our sample is likely captured in lagged and instrumented controls, so discovering which of these warm glow reasons guide donor giving is beyond the scope of this paper.

These reasons are important, though, in the "why do donors give" scholarship. Our results only underscore that the other reasons donors give dominate since performance seems to guide donor decisions so little (Calabrese 2011; Sargeant, West, and Jay 2007). Other frameworks based in sociology, collaborative governance, or community psychology (Burgess, Miller, and Moore 2018; Das, Kerkhof, and Kuiper 2008) may be useful in explaining the specifics of donor decisions. But the organizational economics literature, as well as other ethics-based literatures, does suggest that the provision of necessary goods and services relies so much on donor whims and not on the actual production of those services, which is a problem (Williamson 2019). This study says little about the ethics of this problem but does add to the evidence that governments care more about production and donors care about other things.

For Mitchell and Calabrese (2020), the inability of donors to observe and respond to performance is a problem. Their logic is easy to follow: typically, a feature of optimal institutional design in organizational economics' theoretical application to public sector problems is the ability of principals to observe the behavior of agents and to use this information to observe their decisions. For much of that literature, the relative disadvantage[12] of governments in rewarding performance with funding makes them a suboptimal conduit for economic activity. But this study suggests that governments might have an advantage relative to donors in rewarding performance. Nonprofit performance theory should move beyond the donor principal and be sufficiently nuanced to include government principals since they seem to behave differently.

analysis, this study compares the effects of nonprofit performance on donor and government funding. We find that increases in nonprofit production do not significantly increase donations and a 1% increase in production increases government grants by 0.28%.

The nature of this study sample limits external validity. The data are from HFH affiliates, and although the affiliates are quite decentralized, the HFH brand and similar nature of the business could mean it stands out from nonprofits that might produce other goods and services in important ways. Specifically, the HFH brand might legitimize their affiliates in important ways such that donors can afford to be less responsive to production. Overall donor responsiveness to the overhead ratio suggests that this might not be the case, but this study should certainly be replicated with other samples to see if it is.

While it was convenient for this study, the relatively clean performance measure here (houses produced) may make it easier for governments to observe HFH performance than to observe nonprofits that produce or serve in other less tangible ways. The number of houses built are also likely easier to audit than, say, the number of meals packaged. Also, there are clear strategic linkages that might make government agencies like HUD or local governments dealing with housing insecurity issues more willing to observe performance.

This study also underscores the tremendous need for valid and reliable nonprofit performance data, where appropriate. Much of the performance theory in nonprofit studies and in scholarship theorizing government-nonprofit relationships (like contracting scholarship) is theoretical or uses poor performance proxies. We think that disaggregating the donor and government categories might be a fruitful area of inquiry for future nonprofit management scholarship.

We caution readers that the self-report nature of the IRS form 990 data means that it is difficult to build constructs that capture a more robust capture of government support beyond what is remitted on self-reports. Our study speaks only to reported government grants, and the institutional design on other forms of government funding, like contracts or coproduced programming, might be quite different. There are other data sources with potentially more robust accounting, but these may bring different challenges related to granularity and subcontracting (Thornton and Lecy, 2015). Future researchers might do well to test the robustness of our findings using data sources with different tradeoffs.

Conclusion

Using rare internal production reports from the nonprofit housing sector and dynamic panel data

Supplementary Material

Supplementary data is available at the *Journal of Public Administration Research and Theory* online.

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12 In theory, anyway. See Alchian and Demsetz (1972).

Acknowledgments

Data Availability

We have made data available in an online repository available at https://github.com/Jcoupet/Government-Grants-Nonprofit-Performance. Files include the data files and .do files to illustrate the analysis. Performance data for Habitat for Humanity Affiliates is owned by Habitat for Humanity International and was redacted from this repository in accordance with our Data Use Agreement. Data can be requested by contacting Habitat for Humanity International (https://www.habitat.org/contact).

References

Alchian, Armen A., and Harold Demsetz. 1972. Production, information costs, and economic organization. *American Economic Review* **62**: 777–95.

Alexander, Jennifer, Renee Nank, and Camilla Stivers. 1999. Implications of welfare reform: Do nonprofit survival strategies threaten civil society? *Nonprofit and Voluntary Sector Quarterly* **28**: 452–75.

Andreoni, J. 1990. Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal* **100**(401): 464–77.

Andreoni, James, and A. A. Payne. 2011. Is crowding out due entirely to fundraising? Evidence from a panel of charities. *Journal of Public Economics* **95**: 334–43.

Ba, Yuhao, Jessica Berrett, and Jason Coupet. 2021. Panel data analysis: A guide for nonprofit studies. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 1–16.

Bekkers, Rene, and Pamala Wiepking. 2011. A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving. *Nonprofit and Voluntary Sector Quarterly* **40**: 924–73.

Bhattacharya, Abhi, Valerie Good, Hanieh Sardashti, and John Peloza. 2020. Beyond warm glow: The risk-mitigating effect of corporate social responsibility (CSR). *Journal of Business Ethics* **171**: 317–36.

Brown, Trevor L., and Matthew Potoski. 2004. Managing the public service market. *Public Administration Review* **64**: 656–68.

Brown, Trevor L., Matthew Potoski, and David Van Slyke. 2015. Managing complex contracts: A theoretical approach. *Journal of Public Administration Research and Theory* **26**: 294–308.

Burgess, Adam, Vincent Miller, and Sarah Moore. 2018. Prestige, performance and social pressure in viral challenge memes: Neknomination, the Ice-Bucket Challenge and SmearForSmear as imitative encounters. *Sociology* **52**: 1035–51.

Calabrese, Thad D. 2011. Do donors penalize nonprofit organizations with accumulated wealth? *Public Administration Review* **71**: 859–69.

Cameron, A. Colin, and Pravin K. Trivedi. 2005. *Microeconometrics: Methods and applications*. Cambridge: Cambridge University Press.

Carman, Joanne G. 2009. Nonprofits, funders, and evaluation: Accountability in action. *The American Review of Public Administration* **39**: 374–90.

Carnochan, Sarah, Mark Samples, Michael Myers, and Michael J. Austin. 2014. Performance measurement challenges in nonprofit human service organizations. *Nonprofit and Voluntary Sector Quarterly* **43**: 1014–32.

Carroll, Deborah A., and Keely Jones Stater. 2009. Revenue diversification in nonprofit organizations: Does it lead to financial stability? *Journal of Public Administration Research and Theory* **19**: 947–66.

Charles, Cleopatra. 2018. Nonprofit arts organizations: Debt ratio does not influence donations—Interest expense ratio does. *The American Review of Public Administration* **48**: 659–67.

Charles, Cleopatra, and Mirae Kim. 2016. Do donors care about results? An analysis of nonprofit arts and cultural organizations. *Public Performance and Management Review* **39**: 864–84.

Cohen, Rick. 2011. Habitat for Humanity: The evolution of a high-performing nonprofit network. https://nonprofitquarterly.org/habitat-for-humanity-the-evolution-of-a-high-performing-nonprofit-network/ (accessed November 9, 2020).

Coule, Tracey M., Jennifer Dodge, and Angela M. Eikenberry. 2020. Toward a typology of critical nonprofit studies: A literature review. *Nonprofit and Voluntary Sector Quarterly* 0899764020919807.

Coupet, Jason. 2018. Exploring the link between government funding and efficiency in nonprofit colleges. *Nonprofit Management and Leadership* **29**: 65–81.

Coupet, Jason, and Jessica L. Berrett. 2019. Toward a valid approach to nonprofit efficiency measurement. *Nonprofit Management and Leadership* **29**: 299–320.

Coupet, Jason, and Abigail McWilliams. 2017. Integrating organizational economics and resource dependence theory to explain the persistence of quasi markets. *Administrative Sciences* **7**: 29.

Das, Enny, Peter Kerkhof, and Joyce Kuiper. 2008. Improving the effectiveness of fundraising messages: The impact of charity goal attainment, message framing, and evidence on persuasion. *Journal of Applied Communication Research* **36**: 161–75.

De Wit, Arjen, and Rene Bekkers. 2016. Government support and charitable donations: A meta-analysis of the crowding-out hypothesis. *Journal of Public Administration Research and Theory* **27**: 301–19.

Eggleston, Karen, and Richard Zeckhauser. 2002. Government contracting for health care. In *Market-based governance*, eds. John D. Donohue and Joseph S. Nye, 29–65. Washington, DC: Brookings Institution Press.

Eisenhardt, Kathleen M. 1989. Agency theory: An assessment and review. *Academy of Management Review* **14**: 57–74.

Feiock, Richard C., and Hee S. Jang. 2009. Nonprofits as local government service contractors. *Public Administration Review* **69**: 668–80.

Finley, Andrew R., Curtis Hall, Erica Harris, and Stephen J. Lusch. 2020. The effect of large corporate donors on non-profit performance. *Journal of Business Ethics* 1–23.

Fitzgerald, Clare, Eleanor Carter, Ruth Dixon, and Mara Airoldi. 2019. Walking the contractual tightrope: A transaction cost economics perspective on social impact bonds. *Public Money and Management* **39**: 458–67.

Froelich, Karen A. 1999. Diversification of revenue strategies: Evolving resource dependence in nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly* **28**: 246–68.

Frumkin, Peter, and Mark T. Kim. 2001. Strategic positioning and the financing of nonprofit organizations: Is efficiency rewarded

in the contributions marketplace? *Public Administration Review* **61**: 266–75.

Gazley, Beth, and Jeffrey L. Brudney. 2007. The purpose (and perils) of government-nonprofit partnership. *Nonprofit and Voluntary Sector Quarterly* **36**: 389–415.

Grizzle, Cleopatra. 2015. Efficiency, stability and the decision to give to nonprofit arts and cultural organizations in the United States. *International Journal of Nonprofit and Voluntary Sector Marketing* **20**: 226–37.

Habitat for Humanity. 2020. Frequent misconceptions. http://www.hattiesburghabitat.org/learn/facts-and-fiction/ (accessed November 9, 2020).

Hansmann, Henry. 1981. The rationale for exempting nonprofit organizations from corporate income taxation. *Yale Law Journal* **91**: 54–100.

Hansmann, Henry. 1987. Economic theories of nonprofit organizations. In *The nonprofit sector: Research handbook*, eds. Walter W. Powell and Richard Steinberg, 27–42. New Haven: Yale University Press.

Harbaugh, William T. 1998. The prestige motive for making charitable transfers. *The American Economic Review* **88**: 277–282.

Heist, H. Daniel, and Danielle Vance-McMullen. 2019. Understanding donor-advised funds: How grants flow during recessions. *Nonprofit and Voluntary Sector Quarterly* **48**: 1066–93.

Hughes, Patricia. 2006. The economics of nonprofit organizations. *Nonprofit Management and Leadership* **16**: 429–50.

Jilke, Sebastian, Jiahuan Lu, Chengxin Xu, and Shugo Shinohara. 2019. Using large scale social media experiments in public administration: Assessing charitable consequences of government funding of nonprofits. *Journal of Public Administration Research and Theory* **29**: 627–39.

Karlan, Dean, and Daniel H. Wood. 2017. The effect of effectiveness: Donor response to aid effectiveness in a direct mail fundraising experiment. *Journal of Behavioral and Experimental Economics* **66**: 1–8.

Kelman, Steven J. 2002. Contracting. In *The tools of government: A guide to the new governance*, ed. Lester M. Salamon, 282–318. Oxford: Oxford University Press.

Kerlin, Janelle A., and Tom H. Pollak. 2011. Nonprofit commercial revenue: A replacement for declining government grants and private contributions? *The American Review of Public Administration* **41**: 686–704.

Kim, Mirae, Cleopatra Charles, and Sarah L. Pettijohn. 2019. Challenges in the use of performance data in management: Results of a national survey of human service nonprofit organizations. *Public Performance & Management Review* **42**: 1085–111.

Kroll, Alexander. 2015. Exploring the link between performance information use and organizational performance: A contingency approach. *Public Performance and Management Review* **39**: 7–32.

Lecy, Jesse D., and Elizabeth A. M. Searing. 2015. Anatomy of the nonprofit starvation cycle: An analysis of falling overhead ratios in the nonprofit sector. *Nonprofit and Voluntary Sector Quarterly* **44**: 539–63.

Lecy, Jesse D., and David M. Van Slyke. 2012. Nonprofit sector growth and density: Testing theories of government support. *Journal of Public Administration Research and Theory* **23**: 189–214.

Lee, Chongmyoung. 2019. Understanding the diverse purposes of performance information use in nonprofits: An empirical study of factors influencing the use of performance measures. *Public Performance and Management Review* **43**: 1–27.

Lee, Chongmyoung, and Richard M. Clerkin. 2017. The adoption of outcome measurement in human service nonprofits. *Journal of Public and Nonprofit Affairs* **3**: 111–34.

Lefebvre, Elisabeth E., and Matthew A. M. Thomas. 2017. 'Shit shows' or 'like-minded schools': Charter schools and the neoliberal logic of Teach For America. *Journal of Education Policy* **32**: 357–71.

Yörük, Barış K. 2016. Charity ratings. *Journal of Economics & Management Strategy* **25**: 195–219.

MacIndoe, Heather, and Emily Barman. 2013. How organizational stakeholders shape performance measurement in nonprofits: Exploring a multidimensional measure. *Nonprofit and Voluntary Sector Quarterly* **42**: 716–38.

Marshall, Jeffery H., and David Suárez. 2014. The flow of management practices: An analysis of NGO monitoring and evaluation dynamics. *Nonprofit and Voluntary Sector Quarterly* **43**: 1033–51.

Marwell, Nicole P., and Thad Calabrese. 2014. A deficit model of collaborative governance: Government–nonprofit fiscal relations in the provision of child welfare services. *Journal of Public Administration Research and Theory* **25**: 1031–58.

McWilliams, Abagail, and Donald S. Siegel. 2011. Creating and capturing value: Strategic corporate social responsibility, resource-based theory, and sustainable competitive advantage. *Journal of Management* **37**: 1480–95.

Milgrom, Paul R., and John Donald Roberts. 1991. *Economics, organization, and management*. Boston: Pearson.

Mitchell, George E., and Thad D. Calabrese. 2018. Proverbs of nonprofit financial management. *The American Review of Public Administration* **49**: 649–661.

Mitchell, George E., and Thad D. Calabrese. 2020. Instrumental philanthropy, nonprofit theory, and information costs. *Nonprofit Policy Forum* **11**.

Moynihan, Donald P., and Stéphane Lavertu. 2012. Does involvement in performance management routines encourage performance information use? Evaluating GPRA and PART. *Public Administration Review* **72**: 592–602.

Moynihan, Donald P., and Sanjay K. Pandey. 2010. The big question for performance management: Why do managers use performance information? *Journal of Public Administration Research and Theory* **20**: 849–66.

New York Times. 2019. New Ratings Systems for Charities Aims to Measure Impact of Gifts. https://www.nytimes.com/2019/11/22/your-money/ratings-charities.html. Accessed August 14, 2020.

Parker-Jenkins, Marie, Dimitra Hartas, and Barrie A. Irving. 2019. *In good faith: Schools, religion and public funding*. London: Routledge.

Peng, Shuyang, and Jiahuan Lu. 2020. When government is late to fulfill its end of the bargain: The relational effects of payment delays on nonprofit organizations. *Public Performance and Management Review* 1–27.

Pettijohn, S. L. and Boris, E. T. 2014. *Contracts and grants between human service nonprofits and government: Comparative analysis*. Washington, DC: Urban Institute Brief.

Poister, Theodore H. 2008. *Measuring performance in public and nonprofit organizations*. Hoboken: John Wiley and Sons.

Prentice, Christopher R., and Jeffrey Brudney. 2015. Contracting with nonprofit organizations. In *Government contracting*, ed. Robert Shick, 93–113. New York: Routledge.

Qu, Heng, Richard Steinberg, and Ronelle Burger. 2020. Abiding by the law? Using Benford's law to examine the accuracy of nonprofit financial reports. *Nonprofit and Voluntary Sector Quarterly* **49**: 548–70.

Rose-Ackerman, Susan. 1996. Altruism, nonprofits, and economic theory. *Journal of Economic Literature* **34**: 701–28.

Sargeant, Adrian, Douglas C. West, and Elaine Jay. 2007. The relational determinants of nonprofit web site fundraising effectiveness: An exploratory study. *Nonprofit Management and Leadership* **18**: 141–56.

Shearer, Robert, and Truman Clark. 2016. Are we drawing the correct conclusions? Regression analysis in the nonprofit literature.

Canadian Journal of Nonprofit and Social Economy Research **7**: 22–8.

Smith, Steven Rathgeb, and Michael Lipsky. 2009. *Nonprofits for hire: The welfare state in the age of contracting*. Harvard University Press.

Thornton, Jeremy P., and Jesse D. Lecy. 2015. Good enough for government work: When should government hire nonprofits. *SSRN Electronic Journal*. doi:10.2139/ssrn.2683429.

Tinkelman, Daniel, and Daniel G. Neely. 2011. Some econometric issues in studying nonprofit revenue interactions using NCCS data. *Nonprofit and Voluntary Sector Quarterly* **40**: 751–61.

Van Slyke, David M. 2003. The mythology of privatization in contracting for social services. *Public Administration Review* **63**: 296–315.

Van Slyke, David M. 2006. Agents or stewards: Using theory to understand the government-nonprofit social service contracting relationship. *Journal of Public Administration Research and Theory* **17**: 157–87.

Van Slyke, David M., and Christine H. Roch. 2004. What do they know, and whom do they hold accountable? Citizens in the government–nonprofit contracting relationship. *Journal of Public Administration Research and Theory* **14**: 191–209.

Veronesi, G., Kirkpatrick, I., & Altanlar, A. 2019. Are public sector managers a "bureaucratic burden"? The case of English public hospitals. *Journal of Public Administration Research and Theory* **29**: 193–209.

Warner, Mildred E., and Amir Hefetz. 2012. Insourcing and outsourcing: The dynamics of privatization among US municipalities 2002–2007. *Journal of the American Planning Association* **78**: 313–27.

Weisbrod, Burton A. 1986. Toward a theory of the voluntary nonprofit sector in a three-sector economy. In *The economics of nonprofit institutions*, ed. Susan Rose-Ackerman, pp. 21–44. New York: Oxford University Press.

Weisbrod, Burton A., and Nestor D. Dominguez. 1986. Demand for collective goods in private nonprofit markets: Can fundraising expenditures help overcome free-rider behavior? *Journal of Public Economics* **30**: 83–96.

Williamson, Vanessa. 2019. The philanthropy con. *Dissent* **66**: 85–90.

Young, Dennis R. 2000. Alternative models of government-nonprofit sector relations: Theoretical and international perspectives. *Nonprofit and Voluntary Sector Quarterly* **29**: 149–72.

Zhu, Ling. 2012. Panel data analysis in public administration: Substantive and statistical considerations. *Journal of Public Administration Research and Theory* **23**: 395–428.