The Effect of Government Funding on Nonprofit Administrative Efficiency:
An Empirical Test

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INTRODUCTION

The growing reliance of federal, state, and local governments on service contracting has changed the nature of governance and has led to the progressive hollowing out of the state (Milward and Provan 1993). The landscape of the nonprofit sector has also changed as nonprofit organizations have increasingly been charged with carrying out functions long reserved for the public sector (Boris and Steuerle 1999; Gidron, Kramer, and Salamon 1993; Wolch 1990). Government has slowly shifted much of the responsibility for the delivery of vital human services to nonprofits because these organizations appear to be effective vehicles for the fulfillment of public purposes. Nonprofits have many perceived advantages, including being more innovative, flexible, and responsive to the needs of local communities (Light 2000; Lohman 1992; O'Neill 1989). As a result, contracting out to nonprofits has become a critical managerial option for government at all levels, one that promises to maintain quality and reduce costs, thereby satisfying both service recipients and taxpayers.

While few have disputed the fact that nonprofits are a potent tool for public managers seeking to implement programs, the effects of government funding on nonprofit operations has turned out to be a far more controversial subject. Researchers have seen both promise and peril in nonprofits' growing financial ties with government. While government funds may represent a critical source of revenue, particularly in the fields of health and human services, a nagging concern about the progressive bureaucratization of nonprofit organizations has emerged. Increased oversight and rules have been hypothesized to be important drivers of higher administrative costs. In this way, some researchers have argued that government funding is a channel for the transmission of the perceived inefficiencies of the public sector to the universe of nonprofit service providers.

These cautionary claims have not gone unchallenged. Other researchers have seen the relationship between government and nonprofits as complementary and mutually advantageous, one in which nonprofits capitalize on government's steady financial support to improve the efficiency of the service delivery process. A chief way this has been hypothesized to occur is through the achievement of scale by nonprofits through large blocks of government support. Substantial commitments of public funding may allow nonprofits to improve operational efficiency in ways that are impossible when nonprofits must depend on an unpredictable flow of charitable contributions.

This article draws on a large longitudinal dataset of nonprofit organizations in order to shed light on the consequences of government funding on nonprofit administrative efficiency. In building this empirical model, it is our goal to gain a more grounded understanding of the link between public funding and nonprofit efficiency. The article proceeds in three steps. First, we survey the literature on the nature of public funding and its impact on the administrative efficiency of nonprofits. In the process, we formulate the main research hypothesis that will be tested. Second, we present our data and analyze the impact of public funding on a group of nonprofit organizations over an 11-year period. Third and finally, we conclude by interpreting our results and exploring the implications of our findings for future research on public-nonprofit relations.

LITERATURE REVIEW

Government funding of nonprofit organizations is not value neutral. Public funds flow into some fields of nonprofit activity and avoid others. For example, government funding in areas such as health and human services is quite extensive and public funds have come to represent a critical source of nonprofit revenue in these fields (Boris and Steuerle 1999). By contrast, public funding of arts and advocacy organizations is vastly lower. Government reliance on the nonprofit sector's service delivery infrastructure is thus highly variable and contingent on a number of factors, including the perceived social urgency of the problem and the level of market failure present in the field. Beyond these broad bromides about levels of funding, research on the impact of the complex relationship between government and nonprofit organizations fractures along a major divide, with one side seeing potential benefits for nonprofits and the other side seeing significant problems. We explore these competing perspectives in order to set up our empirical test of the effects of government funding on nonprofit efficiency.

In thinking about these effects, it is useful to start by situating the problem within the framework of new institutionalism in organizational analysis (DiMaggio and Powell 1991; Scott 1995; Meyer and Rowan 1977; Zucker 1988, 1991) which provides a theoretical basis for believing that government funding might lead to bureaucratic tendencies in nonprofits. With its emphasis on legitimacy, satisficing behavior, structural decoupling, and symbols, the new institutionalism represented a major departure from rival theories such as transaction cost economics (Williamson 1981), population ecology (Hannan and Freeman 1989), and resource dependence theory (Pfeffer and Salancik 1978), all of which are built more or less on the rational actor model. In contrast, institutionalism views organizations as pursuing practices that may have little to do with maximizing efficiency. Organizations do not always embrace strategies, structures, and processes that enhance their performance but instead react to and seek ways to accommodate pressures in response to external scrutiny and regulation.

Throughout several of the most important statements of institutional theory (Meyer and Rowan 1977; DiMaggio and Powell 1991; Fligstein 1991), government action has consistently been perceived as playing a central role in initiating the structural transformation of other organizations. While the new institutionalism is usually thought of as being primarily a cultural theory of organizations, emphasizing inter-organizational diffusion of rituals and roles, it has a political core that points to public sector organizations as the drivers and triggers of institutionalization. Government funding, licensing, inspection, and regulation are the levers that act on nonprofit and for-profit firms. In many case studies, coercive isomorphism turns out to be a critical element in the evolution of nonprofit organizations. When organizations are subjected to external coercive scrutiny, evaluation, and regulation, they tend to react defensively and gravitate toward isomorphic transformation. As the pressures from the outside grow, organizations often find ways to either diffuse or eliminate this pressure by changing their internal practices. One of the easiest ways for organizations to change is to adopt those routines and structures that are defined by law or government agencies as legitimate -- doing so may ensure survival by minimizing conflict. However, since organizational action is decoupled from purpose, inefficiency can result from this process.

The basic premise of institutional theory helps frame the problem we are interested in here. It focuses attention on the unintended consequences of government support of nonprofit organizations. It also lays the groundwork for a number of field studies of nonprofits that have looked at the public funding issue.

GOVERNMENT FUNDING AS OBSTACLE

Research on the relationship between government and nonprofits has confirmed many of the impacts theorized by institutional theory, particularly the normative and coercive isomorphism that DiMaggio and Powell (1991) hypothesized results from government support and oversight. Involvement with government funding has been shown to substantially increase pressure on nonprofit organizations to professionalize their operations and to introduce a degree of bureaucratization into even smaller, more informal organizations. Government agencies often include rigorous evaluative and regulatory clauses in their contracts to ensure uniformity in the delivery of services (Krashinsky 1990). These specifications include financial management and accounting requirements, maintenance of minimum quality standards, promotion of basic program objectives, and adherence to certain national policy goals such as environmental protection and equal opportunity. To meet these complex regulatory and formal procedural requirements, many nonprofits must rely more on experienced professional staff and less on volunteers. As a result, some have seen public funding as facilitating the bureaucratization and professionalization of nonprofit organizations (Smith and Lipsky 1993; Perri and Kendall 1997). Indeed, the need for increased professionalization and bureaucracy may result from a broadening of the client base. When nonprofits accept government funding, they often agree to serve clients who are different than those the organization had previously served. To provide for these clients, nonprofits must often deepen and extend the qualifications of their staff and support them adequately. The increased salary expenses that nonprofits incur may or may not be reimbursed by government (Smith and Lipsky 1993).

Nonprofit costs may increase under government funding by virtue of the labor-intensive compliance work that accompanies some forms of public support. Reporting and accounting for public funds often require a substantial amount of time and effort aimed at compliance (Ferris 1993). It is not unusual for larger nonprofits to have staff that do nothing but solicit, manage, and report on the use of government grants and contracts. Management practices within nonprofits may also be affected by extensive fiscal and programmatic accountability requirements. Greater formalism in internal processes is often needed in order to get and keep public contracts. As a result of these demands, some nonprofit managers have come to view government funding in a poor light. Gronbjerg's (1993) study of nonprofit managers found that government funding was rated by managers as more burdensome, less related to mission, and more expensive to maintain than all other funding sources, including private contributions, foundation and corporate grants, and earned income. Ethnographies of nonprofit organizations have found staff often complaining that administrative work and reporting procedures can be complex, tedious, and detailed. Nonprofit organizations must often produce monthly performance reports within tight deadlines, with a high level of detail, and in formats that may vary from one program to the next. Satisfying all of these requirements removes administrative staff from the core organizational mission of providing services to the public.

Staff expansion plays a key role in competitive bidding for government contracts. Nonprofit organizations seek a competitive advantage by working to ensure that their staff embod (stet) the kind of expertise and capacity sought by government contractors. Having a large, well trained, and properly supported staff ready to carry out programs is one way that nonprofits attempt to give public administrators greater confidence in service contracting. Because the quality of service is often difficult to measure and many performance indicators are open to multiple interpretations, public managers have at times fallen back on process measures to assess program effectiveness. Simply having staff that can deliver and support programs is an important measure of organizational capacity. These visible signs also provide evidence of an ability to manage grants and contracts soundly, which is a prerequisite to winning public funds (Smith and Lipsky 1993).

Researchers have found that government funding can affect the internal governance systems of nonprofit organizations. As nonprofits enter into funding arrangements with government, the increasing complexities of contracting requirements can easily begin to take up more of the board's time and effort. Sometimes, these demands may lead a nonprofit to change the actual composition of its board so as to enhance the organization's ability to meet compliance requirements (Harlan and Saidel 1994). These requirements can often be satisfied by increasing the degree of administrative expertise within both the board and staff of the nonprofit (Gronbjerg 1993; Stone 1996; Saidel 1991; Perri and Kendall 1997). Thus, nonprofits have been found to spend considerable resources at both the staff and board levels to master complex public funding streams, maintain existing contracts, and ensure continued funding into the future.

As nonprofits undergo structural changes in response to their interactions with government, conflicts within the organization's culture can be introduced (Frumkin 2000). Bernstein (1991) found that government funding led to increased tension between the management committees of boards and the staff with respect to roles and responsibilities. These contentious relationships originated with compliance issues over government funding. The consequences of this managerial strain can be severe, including an erosion of motivation and commitment. Bernstein found that voluntary and professional staff felt that their motivation for work changed when the work processes within their organizations were formalized and institutionalized.

Public funding can also introduce inefficiencies into the nonprofit capital markets due to misalignment between supply and demand. The geographical allocation of funds at higher levels of government rarely coincides exactly with local needs, and fiscal periods differ considerably among different governmental units. These idiosyncrasies put added pressure on nonprofits to keep well-informed of the complex development of public policy at the federal level in order to stay current about budget trends and allocations at the local level. Tracking the political process, especially in light of the uncertainty associated with budget allocations and policy priorities, and keeping abreast of changes in government budgeting at all levels can easily become a major preoccupation for staff within the nonprofit organization, mostly at the cost of focusing on mission-related objectives (Perri and Kendall 1997; Gronbjerg 1993).

When government agencies delay in approving contracts or grant payments, cash flow problems are often imposed on recipient organizations. These delays are particularly hard for smaller organizations and new entrants to withstand because they do not have built-in mechanisms to deal with unpredictable and delayed funding cycles (Gronbjerg 1993; Bernstein 1991). Beyond having to wait for payments, nonprofits (stet)are forced to accept reimbursements that do not cover all their costs: Smith and Lipsky (1993) found that nonprofits enter into service agreements with public agencies at levels of funding that are not always advantageous. This occurs for a number of reasons, including miscalculation, use of future funding to make up for current deficits, and ill-conceived decisions driven by the competitive bidding process.

Given the costs associated with understanding public funding streams at multiple levels, nonprofits tend to cling fiercely to the public funds that they manage to secure. The management and fundraising skills required to effectively secure government funding are complex and costly to acquire. It is not unusual for the chief development professional within a nonprofit to be among the most highly compensated staff, especially if this person is the only one who knows how to navigate public funding streams. To make matters worse, it is difficult to predict the amount of work that development staff will need to undertake to secure and hold on to public funds. After reviewing the variety of tasks involved in managing the proposal and operating phases of public contracts, Gronbjerg (1993) discovered that the amount or type of administrative work involved is not necessarily correlated with the size of the public grant or contract. Consequently, small government awards may be as demanding on nonprofits as large ones.

While government funding clearly imposes administrative costs on nonprofit organizations, the impact of government funding may need to be understood within the context of a two-way relationship. In one study, Saidel (1991) found that nonprofits and public agencies showed virtually identical degrees of resource dependence on each other. Despite this symmetry, both sides experienced some loss of autonomy as interdependent relationships were forged that linked their fate. In managing this relationship, however, public sector agencies do have one substantial advantage over nonprofits that creates a major differential in power: the ability to impose oversight and auditing requirements. Government has long resorted to accounting controls and reporting procedures that increase the burden on nonprofit organizations, without always providing effective means of oversight for the government (DeHoog 1985, 1990). One of the most visible forms of accounting oversight is the audit requirement.

Nonprofit organizations are subjected to two types of audits.[1] Financial audits are conducted to ensure that there is complete material disclosure and that accounts are maintained according to the stipulated accounting and financial reporting standards. Performance audits attempt to ascertain the efficiency, effectiveness, and accomplishments of a nonprofit in view of its mission. These audits are prepared by independent auditors in compliance with the generally accepted government auditing standards (GAGAS). The audits are targeted at nonprofit organizations that expend $300,000[2] or more from federal awards.[3]

In recent years, audits were being imposed on many small entities that in aggregate accounted for a very small percentage of the total federal assistance. In view of this finding, an effort was made in 1996 to reduce the audit burden. This amendment raised the threshold for a single audit from $100,000 to $300,000, thus exempting small entities from the single audit requirement.[4] It also established a "risk-based" approach for selecting programs for audit, and hence ensured greater coverage for high-risk programs. The burden of these audits on nonprofits is substantial, measured both in terms of the preparation of documentation that is required and the managerial attention that is needed for months at a time. Few nonprofits are able to coast through these audits. Often they must be staffed and monitored by senior executives since the costs of having an unsuccessful audit are high: the potential loss of future public funding.

When one considers the costs associated with bidding on and winning contracts and the challenges of meeting accountability and reporting demands once funds do arrive, nonprofits face major challenges in their ability to operate efficiently under government funding. Based on one reading of the research literature, it is possible to formulate a testable research hypothesis:

Nonprofit organizations that depend heavily on public funding will incur greater administrative costs and have higher administrative overhead rates than nonprofit organizations that receive lesser amounts of public funding.

GOVERNMENT FUNDING AS OPPORTUNITY

Before moving to the analysis of our data, it is important to recognize that the foregoing has been a selective reading of the research literature on public-nonprofit relations. Not all of the literature has concluded that public funding weakens the ability of nonprofits to operate efficiently. In fact, some research has argued that the flow of public funds into nonprofit organizations allows nonprofits to expand substantially their operations and to achieve greater levels of operational efficiency and improved effectiveness. In the place of mission distortion, loss of autonomy, and increased bureaucracy, some researchers have suggested that public funding creates the conditions for a mutually advantageous partnership between the sectors.

Salamon (1987a, 1987b, 1995) has argued that the nonprofit sector is not secondary and derivative of the other sectors, but rather it is a primary response mechanism to public problems. Rather than filling gaps, the nonprofit and voluntary sector actually takes the lead in many areas. When nonprofits fail to provide services in sufficient quantities because of resource limitations, government responds to this “voluntary failure” by offering supplemental services or by providing funding to allow for greater nonprofit production: “Government involvement is less a substitute for, than a supplement to, private nonprofit action”(Salamon 1995, 44). It is voluntary failure that gives rise to government action and to the funding patterns that support what Salamon termed “third-party government.”

Although the nonprofit and voluntary sector is portrayed as playing a leadership role, Salamon ultimately argued that nonprofits need government to both improve the quality and efficiency of their services. Salamon identified several areas where "government is in a position to generate a more reliable stream of resources, to set priorities on the basis of a democratic political process instead of the wishes of the wealthy, to offset part of the paternalism of the charitable system by making access to care a right instead of a privilege, and to improve the quality of care by instituting quality-control standard” (Salamon 1995, 49). Salamon argued that there was no solid evidence that a close and collaborative relationship between nonprofits and government did anything detrimental to nonprofit organizations. On the contrary, the partnership in public service that is forged when funds cross sector boundaries satisfies both sectors.

Other early accounts of public-nonprofit relations saw more potential benefits than real dangers in the extensive funding relations linking nonprofits with government. Kramer (1980) described a comfortable network of informal relationships between nonprofits and government agencies sharing similar cultures, recognizing their interdependence, and anxious not to disturb a symbiotic relationship. Moreover, Kramer argued that access to government contracting helps nonprofits build their legitimacy and attract resources, management capacity, and political power. Government funding may direct nonprofits to deliver more services to low-income groups, but this only validates the status of nonprofit organizations as vital and responsive members of the community. Salamon (1995) noted that when nonprofits are left to their own devices, they tend to focus less on the needs of the poor because of problems generating income-flows to support this work. Government funding complements the nonprofit sector's other sources of funds and helps to broaden the availability of services. Hence, Salamon has noted that as government support increases, so does the focus of nonprofit organizations on the needs of the poor. Using empirical data, he has attempted to establish that there is a relationship between the funding structure of an agency and its client focus (Salamon 1995).

Kramer (1980) has argued that efficiency is seldom compromised by the accountability requirements of public agencies. He found that there was in fact a low level of regulation and a high level of mutual dependence inherent in nonprofit contracting arrangements with the government. A positive account of the effects of administrative formalization has also been constructed. Kramer suggested that formalization as an aspect of bureaucratization can actually produce greater reliability and accountability. Although it may limit flexibility and adaptability, procedural formalism does not necessarily preclude nonprofits from achieving higher levels of operational efficiency either. Formalization may improve a nonprofit organization's ability to handle significant changes in the environment, manage larger programs, and adopt innovations (Kramer and Grossman 1987) – all of which may prove critical to achieving higher levels of programmatic effectiveness and administrative efficiency.

These competing arguments cannot be dismissed. While much of the recent literature has found real dangers in nonprofit dependence on public sector funding, it is important to recognize that an earlier, alternative diagnosis of this complex relationship exists. This literature sees real potential in the growing flow of funds into nonprofit organizations and the possibility of nonprofits achieving a level of scale in their operations that would be impossible in the absence of public support. With large amounts of government funds flowing into human service nonprofits, these organizations are in a position to improve their management and operations. The process of moving from amateur forms of care offered largely by volunteers to professional forms of care administered by trained experts may do more than improve the effectiveness of nonprofits. It may also engender a certain discipline and sensitivity about the proper use of public funds that can lead to improved efficiency. given that large amounts of public funding may allow nonprofits to substantially grow the size of their organizations, there is the possibility of achieving economies of scale that are otherwise impossible.

Given these competing visions of the relationship between public funding and nonprofit efficiency, it is important to proceed with an understanding that our research hypothesis is in fact highly contested. In analyzing our data on the public funding of nonprofits, we attempt to make an empirical intervention into this ongoing debate which has rested, to date, largely on theory, case studies, and limited survey data. Our goal is to examine whether the data confirms or disproves the hypothesis that the receipt of government funding places significant administrative burdens on nonprofits as measured in terms of a higher "administrative overhead rate," a prevalent way managers track the ratio of administrative to total program expenses.

DATA & METHODS

Our data come from information provided to the IRS by nonprofit organizations that are required to file a Form 990 information return over the period 1985-1995. Although nonprofit organizations are generally exempt from paying income tax, they must nonetheless file an annual return with the IRS reporting detailed financial and other activity for the year.[5] While there have been some problems associated with this reporting form (Froelich 1997), particularly the fact that the data is not based on audited financial statements, it still represents the only broad-based financial reporting instrument used by large and small nonprofit organizations across all fields of activity.

SAMPLE SELECTION

Given that we are primarily interested in the effects of government funding on the administrative efficiency of nonprofits, we have restricted our sample to only those nonprofit organizations with at least one year of government funding over the period under study. Further, in order to create a balanced panel, we follow common practices in limiting the sample to those nonprofits appearing in each panel year. Taking these two sample selection criteria together, the final dataset consists of 1,172 nonprofit organizations, yielding a total of 12,892 observations.[6] This panel constitutes a stratified random sample of the universe of nonprofit organizations that are required to file an IRS Form 990 information return and have received at least one year of government funding over an 11-year period.

VARIABLE MEASURES

The dependent variable in our model is nonprofit administrative efficiency, as measured by the ratio of administrative to total expenses in a given year. This is a common way to assess administrative efficiency in nonprofits (Frumkin and Kim 2001), and it gives one a simple measure that can be used to compare organizations. In making such comparisons, it is important to recognize that administrative overhead rates, as they are usually called, will vary considerably depending on the field within which the nonprofit is operating. Still, the ratio of administrative expenses to total expenses gives us a point of entry into the question of operational efficiency.

The first independent variable in the analysis is government contributions and grants, as measured by the percentage share of government contributions and grants to total revenue in a given year. The IRS defines government contributions and grants as follows[7]: "Grants that encourage an organization receiving the grant to carry on programs or activities that further its exempt purposes are grants that are equivalent to contributions…However, a grant is a payment for services, and not a contribution, if the grant requires the grant recipient to provide that grantor with a specific service, facility, or product rather than to give a direct benefit primarily to the general public or to that part of the public served by the organization" (IRS 1996, 10). The distinction between a grant and a payment for service is subject to the "primary purpose" test: "A grant or other payment from a governmental unit is treated as a contribution if its primary purpose is to enable the donee to provide a service to, or maintain a facility for, the direct benefit of the public rather than to serve the direct and immediate needs of the grantor even if the public pays part of the expense of providing the service or facility" (IRS 1996, 10). In order to address potential simultaneity issues, a lagged value of this variable was used in the analysis.

The second independent variable in the analysis is program service revenue including government fees and contracts, as measured by the percentage share of program service revenue to total revenue in a given year. The IRS defines program services as those activities that "primarily form the basis of an organization's exemption" and includes as revenue both fees paid directly by clients and customers and those fees that are paid by individuals through government insurance programs: "For example, a hospital would report on this line all of its charges for medical services (whether they be paid directly by the patients or through Medicare, Medicaid, or other third-party reimbursements), hospital parking lot fees, room charges, laboratory fees for hospital patients, and related charges for service" (IRS 1996, 11). A lagged value of this variable was also used in the analysis. Because the 990 Form does not separate out government contracts from other forms of program service revenue, our interpretation of this variable in the analysis that follows is cautious and tentative.

The following variables were included as controls in the regression analysis: direct public support, as measured by the percentage share of individual, corporate, and foundation contributions to total revenue; indirect public support, as measured by the percentage share of contributions from federated funders to total revenue; and total revenue, as measured by the natural logarithm of the total amount of money flowing into the organization from all sources. As with our independent variables, these controls are measured in each panel year and the lagged value of each variable is used in the analysis. Finally, our model includes dummy variables for the health and human service industries, as defined by the National Taxonomy of Exempt Entities (NTEE).[8] These dummy variables allow us to isolate the effects within these two fields where government funding is predominant.

RESULTS & ANALYSIS

The model was estimated via a general least squares (GLS) estimator. As commonly found in time-series estimation, the longitudinal nature of the data exhibits first-order serial correlation.[9] Accordingly, the coefficient estimates are corrected for the presence of first-order serial correlation.[10] Table 1 reports descriptive statistics for the entire sample, including the means, standard deviations, and pooled correlation matrix. Table 2 presents the results of our regression models.

The purpose of this analysis was to better understand the effect of government funding on the administrative efficiency of nonprofit organizations. In particular, we set out to test the hypothesis that greater governmental funding would result in less efficiently run nonprofits, as measured by administrative overhead rates. In the first column in Table 2, we present the results of the overall model. In the following four columns, we breakdown the overall model and perform a quartile analysis based upon the total amount of government funding in a particular year. We have broken down the analysis into these quartiles to shed some light on the effects of the A-133 and its predecessor audits. By limiting our sample to those nonprofits that received at least one year of government funding, the results presented in Tables 1 and 2 are thus conditioned on the receipt of public funds.

We divided the sample into quartiles based upon the total amount of government funding in a given year.[11] The bottom quartile (0-25th percentile) represents zero government funding. The second quartile (25-50th percentile) represents a level of government funding greater than zero and less than \$408,198. The third quartile (50-75th percentile) represents a level of government funding greater than \$408,198 and less than \$2,009,191. The top quartile (75-100th percentile) represents a level of government funding greater than \$2,009,191. The quartile analysis provides an opportunity to uncover more subtle patterns not otherwise evident in the overall model. In addition, the quartile analysis appears to fit the data better with adjusted R-squares ranging from 0.13 to 0.19 (as opposed to 0.09 for the overall model).

In the overall model of Table 2, the coefficient of 0.021 for government contributions and grants is positive and statistically significant at the 0.01 level. The interpretation of this estimate is similar to that for an elasticity. Specifically, a 1% increase in government funding is correlated with a 2.1% increase in the share of administrative to total expenses the following year. Note that an increase in the share of administrative to total expenses directly corresponds to an increase in nonprofit administrative overhead rate. Thus, the results suggest that the receipt of government contributions and grants appears to make nonprofits more inefficient and more bureaucratic in their operations, at least by the measure of nonprofit efficiency used here. Considering the previous qualitative studies of nonprofit organizations under government funding, this finding may be attributable to the procedural demands associated with receiving government funds which can take the form of reporting requirements, compliance with audits, and other oversight measures.

The quartile analysis, however, reveals a more complex pattern in the correlation between government grants and nonprofit efficiency. The coefficient estimates for the bottom quartile are negative and significant, while the estimates for the 2nd quartile are positive and significant. The estimates for the bottom quartile, however, are only modestly significant at the 0.1 level, whereas the estimates for the 2nd quartile are highly significant at the 0.001 level.[12] The coefficient estimates for government funding in the top 2 quartiles are not statistically significant. One way to interpret these results is to recognize that the amount of government contributions and grants may matter and reflect the institutional importance accorded to these funds. For organizations receiving at least some government grants, those receiving the least (2nd quartile) may be particularly exposed to these institutional effects. Nonprofits in the top tiers of government funding are an elite group of organizations that may have overcome the initial effects of public funds and have come to be unresponsive to government's funding embrace.

In the overall model, the impact of program service revenue, including government contracts and fees, on nonprofit administrative efficiency is negative and modestly significant at the 0.1 level. The coefficient estimate of –0.015 suggests that an increase of 1% in program-related fees for service corresponds with a 1.5% decrease in administrative efficiency the following year. This finding is consistently replicated in the quartile analysis, with coefficient estimates that are negative and statistically significant in each quartile. Interestingly, the quartile analysis suggests that the efficiency gains from raising a nonprofit's share of program service revenue are even greater (and more significant statistically) than the overall model indicates, particularly in the bottom quartile where government funding has its greatest impact on nonprofit overhead rates. An important part of these program service revenues, particularly in the health and human service industries, comes in the form of government reimbursed charges. Although this variable is not a perfect proxy for government contracts because it includes other forms of earned income, we believe that this measure of program service revenue (derived from clients fees, entrepreneurial activities of all sorts, government funds in the form of contracts and fee reimbursements) suggests that it may be wrong to conclude that all government funding leads to higher administrative overhead rates in nonprofits. We explore this issue further in our conclusion.

Direct public support, which includes individual, corporate, and foundation contributions, was not significant in the overall model. In the quartile analysis, however, three out of the four coefficient estimates were negative and significant. The bottom quartile was significant at the 0.001 level while the 2nd and 3rd quartiles were significant at the 0.1 level. These findings suggest that an increase in direct public support corresponds to a decrease in nonprofit overhead rates. Interestingly, the pattern displayed in the quartiles is similar to that found for program service revenue, namely, that direct public support has its greatest effect in the lower ranges of public support. In the top tier of public support, direct public support does not seem to affect nonprofit overhead rates to a significant degree.

Indirect public support, which includes contributions from federated funders like the United Way, is negative and statistically significant at the 0.01 level in the overall model. The coefficient estimate of –0.052 suggests that an increase of 1% in indirect public support corresponds to a decrease in nonprofit efficiency by 5.2%. This finding was replicated for the bottom quartile, in which the coefficient estimate was negative and significant at the 0.01 level. The coefficient estimates for the top three quartiles were insignificant. Again, it appears that indirect public support has its only significant effect in the lower ranges of public support. These findings would suggest that an increase in funding from sources like the United Way corresponds with lower nonprofit overhead rates in the bottom quartile of government funding.

Organizational size, as measured by the log of total revenue, is negative and highly significant at the 0.001 level. The coefficient estimate of –0.007, however, indicates only a moderate increase in overhead for larger nonprofits. Specifically, a 1% increase in organizational size corresponds to a 0.7% decrease in overhead the following year. This pattern is replicated in each of the quartiles except for the 2nd, in which it is not statistically significant. This finding suggests that size does matter for nonprofits in terms of their administrative overhead rates, but the beneficial effect is not as great as might have been thought.

The industry dummies for health and human service nonprofits are both statistically significant. The coefficient estimate for health is positive in the overall model, suggesting that health-related nonprofits exhibit a 1.1% increase in overhead as compared with the control group (all other nonprofits except human service). This pattern replicates itself in every quartile except for the 3rd, in which the coefficient is negative. The coefficient estimate for human service is negative and highly significant at the 0.001 level in the overall model, suggesting that these nonprofits exhibit a 3.2% decrease in overhead as compared with the control group (all other nonprofits except health). This pattern also replicates itself in all quartiles.

CONCLUSION

Our finding that government contributions and grants significantly increase the administrative to total expense ratio of nonprofits while government contracts and fee reimbursements decrease the same ratio deserves further comment and exploration. By way of conclusion, we discuss possible explanations for these findings and their implications for future research on the effects of public funding on nonprofit administrative efficiency.

There are many ways that government agencies can provide funds to nonprofit organizations. Public managers can make outright grants; they can write and administer contracts; they can provide reimbursements; they can issue vouchers; they can allow special tax deductions for contributions to certain kinds of organizations; or, they can provide special tax breaks to supplement the general tax exemption that nonprofit organizations enjoy. While some forms of government action toward nonprofits are more common than others, it would be a mistake to view the many forms of public support as a monolith. Considering just the two forms covered in the IRS Form 990 that we include in our model, it should be clear that important differences exist which may have real implications for nonprofit organizations.

Our finding that government contributions and grants are correlated with higher administrative overhead rates in nonprofit organizations can probably best be understood in terms of the amount of oversight that is attached to this form of government funding. Since government grants are typically for large programmatic initiatives or capital expenditures, it should hardly be surprising that this form of support places significant accountability demands on nonprofits. Unlike reimbursement for fees charged to clients that are parceled out in relatively small increments based on the cost of assisting clients, these larger blocks of funds likely require greater administrative support by virtue of the fact that they are often used on new initiatives.

Our other finding that the receipt of program service fees (including government fees and contracts) is correlated with lower administrative overhead rates needs to be treated with some caution. Because this variable mingles fee reimbursements by government (such as those provided under Medicare) with other sources of earned income, it is difficult to be certain about the ultimate effect of just government fees and contracts apart from the other revenue sources included in this variable. That said, however, there are two ways to view the finding that fee-based reimbursements and contracts from government may be associated with lower administrative overhead rates. One way is to see the comparatively lower level of administrative costs as driven by lower compliance costs. Fee reimbursements and contracts may simply demand lower staffing levels and attention by nonprofits as compared to government contributions and grants. The other way to view this result involves a more cultural interpretation. It may be that nonprofits that engage in fee-based activities, including both government-reimbursed and non-reimbursed services, simply have a more businesslike approach to the management of their organizations. The culture of commercialism within some nonprofits may be such that administrative waste is more actively pursued and eliminated. Thus, our variable may be capturing both the effect of a different form of government support and the effect of fee-based activity pure and simple on the operational practices of nonprofits.

In the end, we see a more important consequence of our findings – a conclusion that we hope might inform future research on service contracting. While some of the research on the public funding of nonprofits has considered the differences between grants and contracts on an analytical and theoretical basis, there is a surprising gap in our current understanding of the real effects of government's multiple and diverse forms of funding on nonprofit organizations. While we considered in our review of previous research two important schools of thought on the effects of public funding on nonprofit organizations, it may well be that a third wave of research is needed. If nothing else, this new research would do well to start from the premise that all tools of government action are not equal in the eyes of nonprofit organizations. Sorting out when and why various forms of public support may work best in terms of both meeting public needs and helping nonprofit organizations operate efficiently represents an important but still unmet research challenge.

NOTES

1. Our discussion here draws heavily on Wilson, Hay, and Kattelus (1999).
2. An important clarification came about as a result of the amendments made in 1996. The required audit threshold was based on the federal awards expended rather than awards received. A federal award has been expended if the awarding agency comes under risk and the non-federal recipient becomes accountable of how the funds are employed. Risk exposure arises when the nonfederal entity engages in activities that render it accountable for use of funds in compliance with laws and regulations relating to the award. Examples are, expenditure/expense transactions associated with grants, cost-reimbursement contracts, cooperative agreements, direct appropriations, disbursement of funds by a pass-though entity, the receipt of property, and the receipt or use of program income.
3. The A-133 defines federal awards as: "Federal assistance, as defined by the OMB, as grants, loans guarantees, property, cooperative agreements, interest subsidies, insurance, food commodities, direct appropriations, and other assistance. Federal cost-reimbursement contracts that nonfederal entities receive directly from federal awarding agencies or indirectly from pass-through entities. It does not include procurement contracts, under grants or contracts used to buy goods or services from vendors…" Office of Management and Budget, OMB Circular No. A-133, *Audits of States, Local Governments, and Non-Profit Organizations* (Washington DC: OMB, 1996).
4. During most of the period covered in our panel dataset (1985-1995), the earlier audit threshold of $100,000 was in effect.
5. In addition to religious organizations and private foundations, nonprofit organizations with gross receipts less than $25,000 are not required to file a Form 990 return.
6. Since lagged values are used for some variables in the analysis, one year of data is sacrificed. Accordingly, the total number of observations used in the analysis is 11,720.
7. An example of a grant is a "payment by a governmental unit for the construction or maintenance of library or hospital facilities open to the public." (IRS 1996, 10).
8. Human service includes those organizations whose missions are related to crime, employment, food/nutrition, housing/shelter, public safety, recreation/sports, and youth development.
9. The Durbin-Watson test statistic was used to ascertain the presence of serial correlation.
10. We corrected for the presence of first-order serial correlation via the Prais command in Stata (version 6.0).
11. The quartiles are approximations of the stated percentile ranges (rather than exact demarcations) because the percent of

nonprofits with zero government funds in a given year is slightly greater than 25%.

12. Theoretically, we expected that the coefficient estimate for the bottom quartile of government contributions and grants (i.e., zero) would be statistically insignificant. Furthermore, given the modest significance of this estimate, we conclude that it is due to randomness in the data.

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