Research Article

Intersecting Sectors? The Connection Between Nonprofit Charities and Government Spending

Deborah A. Carroll – University of Central Florida
Thad D. Calabrese – New York University

In this paper, we articulate that rent-seeking behavior by nonprofit charities and budgetary discretionary behavior by public agents should lead to a positive correlation between nonprofit charity and government spending. Using a large national database of government spending that we merged with charitable spending, we empirically test our research question. Overall, we find a positive correlation between spending by both sectors that is unequivocal and nontrivial, thus supporting the rent-seeking theory of nonprofit charities' behavior. When we examine spending by the sectors by specific areas of service provision to determine public budgetary reallocation, our results indicate positive associations in legal and judicial services, libraries, and public welfare spending – supporting the rent-seeking explanation. However, we found no correlations between spending by the two sectors in several important areas of service provision, including education, health, hospitals, and housing. The lack of correlation in these areas might be indicative of government failure theory rather than rent-seeking. Importantly, the positive association between charitable and government spending suggests that public spending may increase beyond optimal levels – leading potentially to tax burdens that are greater than necessary, crowding out of private enterprise, and spending patterns that are difficult to alter in light of fiscal shocks.

Keywords: Nonprofit Finance, State and Local Government, Rent Seeking, Bureaucratic Discretion

A case in which government intervention in the market economy is deemed necessary is when the public sector acts as a vehicle for overcoming free rider problems. In such a case, private provision of public goods or services would be inefficient and/or socially suboptimal. Therefore, government might directly provide such goods or services or subsidize the private provision of these goods or services to achieve efficiency gains or the socially desirable level of provision. Publicly financed private provision also might take the form of contracting with the charitable nonprofit sector to provide goods or services.

Existing literature has found that private donations to charities generally decrease as a result of government financing; effectively, donors free ride off government provisions by reducing their own contributions (Abrams & Schmitz, 1984; Andreoni & Payne, 2011; Brooks, 2003, 2004; Gruber & Hungerman, 2007; Kingma, 1989; Roberts, 1984). A caveat, however, is the very important assumption that donors are aware of the amount of government funding their preferred charity receives and reduce their private contributions in response (Horne, Johnson, & Van Slyke, 2005). However, through survey research designed to test this underlying assumption, Horne et al. (2005) found that donors have little knowledge of government subsidies to nonprofits and are unlikely to change their giving behavior in response to government funding. More recently, Thornton (2014) found mixed results with respect to the relationship between government funding of charitable nonprofits and demand for contributions. In addition, econometric approaches used to overcome endogeneity within this literature indicate the likelihood of reverse causation (Bradley, Holden, & McClelland, 2005; Brooks, 2007). Therefore, we believe a void remains in the literature regarding the interconnectedness between the charitable nonprofit and government sectors' activities and financing.

Carroll, D. A., & Calabrese, T. D. (2017). Intersecting sectors? The connection between nonprofit charities and government spending. *Journal of Public and Nonprofit Affairs, 3*(3), 247-271. doi:10.20899/jpna.3.3.247-271

In this paper, we expand upon the median voter model used by Becker and Lindsey (1994) to offer an alternative theoretical explanation of the government-charity free rider problem. We base our explanation upon the well-established theories of rent-seeking behavior of nonprofit charities and budgetary discretion behavior of public agents. In summary, we argue that government tax exemptions at the state and local levels are pivotal for nonprofit charities' capital formation. These charities have incentives to incorporate in higher tax locations and lobby governments for both continued tax benefits and direct financing for services, resulting in increased government spending (Lecy & VanSlyke, 2013; Luksetich, 2008). In doing so, nonprofit charities behave as classic interest groups or rent seekers to advocate for government policies (Buffardi, Pekkanen, & Smith, 2015; Fyall, 2016). Further, because nonprofit charities and governments collaboratively provide public services, government agents might realize increased budgetary discretion through these relationships (Jang & Feiock, 2007). Specifically, governments can rely upon nonprofit charities to provide particular public goods, so they can focus spending elsewhere. Hence, spending that flows through charities is easier to alter than outright cuts in the government provision of public services or altering debt obligations and/or personnel contracts.

In addition to establishing this theoretical framework, we conduct the first large-scale national study that combines two comprehensive data sets – one on government spending and the other on charitable spending – to analyze our hypothesized correlations between the sectors. Our results suggest that charitable spending is associated with higher government spending, all else equal, which is consistent with rent-seeking behavior of nonprofit charities. However, when we break apart government and charitable spending into specific service areas, we see that this theory is supported in some important areas such as public welfare but not in others. And, contrary to existing assumptions in the extant literature, we find little empirical evidence supporting the notion that government agents strategically reduce spending in particular areas in which nonprofit charities are operating.

The implications of our findings suggest that government spending may increase beyond optimal levels. This could lead to tax burdens that are greater than necessary, crowding out of private enterprise, and/or spending patterns that are difficult to alter in light of fiscal shocks. Further, nonprofit charities that become increasingly dependent upon government support may find themselves vulnerable when significant economic contractions require subnational governments to reduce spending to meet balanced budget requirements. However, nonprofit charities provide public goods with significant positive externalities (Bises, 2000). Therefore, it is imperative for policymakers to understand the potential relationship between charitable and government service provision. Our findings suggest that nonprofit charities do not simply implement policies; they may be associated with the resources made available for particular public services.

Nonprofit Charities, Tax Exemptions, and Rent-Seeking

Flowing from the mid-1970s work of Martin Feldstein and his coauthors, early research began an ultimately inconclusive quest into the structure of the U.S. income tax in terms of its treatment of charitable contributions and its association with the amount and distribution of giving and philanthropic activities. By providing evidence from various data samples of the price elasticity of charitable giving due to the federal deductibility of charitable contributions from taxable income, which lowers the price of charitable contributions relative to other goods, Feldstein (1975), Feldstein and Clotfelter (1976), and Feldstein and Taylor (1976) were among the first to associate government tax exemptions with outcomes related to the charitable

nonprofit sector. Clotfelter (1980) followed these studies with further evidence that the price of giving is associated with charitable contributions beyond simply the effect of itemization, although short-run income and price elasticities are smaller than the long-run impact on giving. More recent evidence suggests that taxes have both transitory and persistent price and income effects on levels of contributions, and the persistent component of price and income changes is more influential on charitable donations than are the transitory ones (Auten, Sieg, & Clotfelter, 2002).

In addition to the federal deductibility of charitable contributions, the federal government exempts nonprofit charitable organizations that are registered with the Internal Revenue Service from income taxation on annual mission-related profits. Although this exemption is typically thought of as a general public subsidy for charities, Hansmann (1981) suggests this argument is not at all compelling. For example, if nonprofit charities naturally emerge in response to contract failure, it makes little sense to offer incentives for an organic response.[1] Rather, Hansmann (1981) posits that the tax exemption is best justified as compensation for constraints nonprofit charities face on capital formation, especially in industries in which charities are more efficient service providers than for-profits. Capital formation in the nonprofit charitable sector is especially dependent upon retained profits because of the lack of equity markets. Thus, the tax exemption permits charities to increase their retained earnings on a pretax basis.

While Hansmann (1981) focuses on the federal income tax, states and localities levying similar corporate income taxes follow the federal example and also exempt registered nonprofit charities' mission-related profits from taxation. Hence, state and local tax exemptions also encourage nonprofit charities' capital formation. Because much of nonprofit charities' capital takes the form of fixed assets (Calabrese, 2013), this tax exemption is especially valuable at the state and local levels because of the variation in types and effective rates of taxes imposed upon these types of assets. In addition to income tax exemptions, registered nonprofit charities are usually exempt from sales taxes that are levied at the state level, as well as property taxes at the state and/or local level. Of course, such exemptions also assume that earnings, purchases, and property are used for mission-related services. While states and localities with higher taxes are indicative of higher demand for public spending, all else equal, nonprofit charities should be expected to locate in these areas to maximize the value of their tax exemption benefits. In fact, the literature has largely found that the number of nonprofit organizations actually operating in high-stress and high-need areas tends to decrease (Bielefeld, 2000; Grønbjerg & Paarlberg, 2001; Peck, 2008). In addition, Twombly (2003) found that economic need is not associated with nonprofit entry into metropolitan regions.

Critically for our purposes, nonprofit charity dependency on governments for capital formation via tax exemption provides incentive for particular types of charitable behavior. Specifically, representatives might expend economic resources to "lobby"[2] state and local government

---

[1]Smith and Grønbjerg (2006) document the "civil society" framework that explains nonprofit formation as the embodiment of the values necessary for democracy and good government. This is yet another framework that would explain nonprofit charity tax exemption not as a subsidy but as something that keeps a vital sector independent from the government.

[2]Incorporated public charities qualifying for federal tax exemption under 501(c) of the Internal Revenue Code are restricted from spending organizational funds on lobbying and campaign activities. However, IRS restrictions do not prevent nonprofit charities from courting government officials as a voting bloc (employees, board members, and also recipients of the charitable service), as a source of campaign funds from individuals employed or volunteering at these nonprofit charities (including board members), or as a source of legitimation for addressing certain social needs.

officials for continued tax exemptions (Knauer, 2010). Alternatively, these individuals might advocate for increased government financing for public service areas in which they have a vested interest. This is the essence of rent-seeking behavior (Anderson, 2012). In this regard, nonprofit charities behave as an interest group with preferences for beneficial government tax and expenditure treatment – in the aggregate or in specific service delivery areas (Buffardi et al., 2015; Fyall, 2016). Such behavior is similar to that articulated by Mosley (2012), in which social service providers advocate with government funders to ensure direct public financing for charities continues over time. In fact, several studies have found that government funding of charitable nonprofits leads to greater geographical concentration and/or survival of such organizations (Hager, Galaskiewicz, & Larson, 2004; Lecy & Van Slyke, 2013; Luksetich, 2008; Matsunaga &Yamauchi, 2004; Twombly, 2003).

Overall, therefore, we argue that tax exemptions encourage nonprofit charities' capital formation, and tax exemptions are even more valuable at state and local levels where variations in tax policy occur. We further argue that the dependence of nonprofit charities on these tax exemptions will lead these organizations to advocate for continuation and expansion of tax benefits and/or direct financing in service areas in which charities operate. Such rent-seeking in nonprofit charities articulating self-interested behavior is expected to be associated with greater amounts of public funds directed toward them.

Rent-Seeking and Government Spending

The median voter model describes how individual demands are aggregated under majority rule; it suggests market demand when aggregated by majority rule will equal the demand of the median voter (Holcombe, 1989). As such, the model helps to explain collective preferences in light of the focus of public choice theory on the individual; in certain circumstances, the median voter's preference will emerge as the collective preference in a majority rule election system (Holcombe, 1989). By extension, scholars use the median voter model as the basis for suggesting that government will provide services in response to the median voter's desired level, thereby satiating demand of the median voter and every voter with preferences for public goods below the median voter's desired level. An implication of this outcome is that there will be voters with preferences for public goods provision at a level above that desired by the median voter, and these above-median voters' demands would be left unmet.

Weisbrod (1977) explained that, because the government provides public goods based on the preferences of the median voter in a jurisdiction, a minority of voters will desire additional public goods not provided by government, assuming a certain degree of heterogeneity of tastes within the population. This unmet demand for additional goods – termed "government failure" – leads these voters to provide voluntary contributions to the nonprofit charitable sector to meet their demand for additional public goods; these contributions are viewed essentially as voluntary taxes.

However, Tiebout (1956) explains that voters with unmet demands would simply move to a jurisdiction ("vote with their feet") where the median preference was closer to their own.[3] The implication is that, rather than voluntarily contribute to nonprofit charities to provide additional public goods, voters will instead sort themselves into communities with relatively homogeneous

[3] Weisbrod (1977) recognizes this in his own work and suggests that locational decisions may be imperfect. This would indicate that, even with Tiebout sorting, some unmet demands for public goods remain. Galle (2011), however, finds the concerns about sorting friction to be overstated.

demands for such goods. Ferris (1998) indicates this will lead to government (rather than charitable nonprofit) provision. In addition, a federal system of government reduces the need for actual relocation to occur to achieve the outcomes of Tiebout sorting. In particular, voters with unmet demands from one government may have their desired level of public goods supplied by another governmental entity – either a different level of government or an overlapping special district government (Galle, 2011). Therefore, with perfect Tiebout sorting, there will be no unmet demand. Moreover, even with restrictions to Tiebout sorting, a federal system of government with multiple service providers (i.e., federal, state, county, municipal, special district, etc.) will satisfy most preferences because less actual relocation is required due to both vertical and horizontal competition (as well as collaboration) among government service providers.

In addition, Becker and Lindsey (1994) suggest the median voter is indifferent to which sector produces public goods as long as the correct amount of services is provided. In fact, most citizens free ride on the political activities of others or are entirely ignorant of their own stake in a policy outcome (Wilson, 1989). In addition, Handy et al. (2010) found that most consumers cannot distinguish between charitable and government service providers. Therefore, those voters or interest groups with strong preferences for specific outcomes (for specific spending on particular public goods, for example) are likely to dictate how politicians allocate public spending. This is made possible by the public input requirements inherent in government budget processes as well as through referendum requirements many governments now face. In such a case, one implication of rent-seeking is that total government spending may increase because of advocacy.

This complements public choice theory, which posits that elected officials and bureaucrats are self-interested agents and therefore might be persuaded to meet the demands of specialized groups rather than the preferences of the median voter because they can collect rewards from these groups (Olson, 1965). Specifically, "charitable tax subsidies represent the endorsement of a fundamental reallocation of responsibility between the federal government and the charitable community for certain social services. This newly configured charitable community has something to offer both the self-interested and the public-spirited legislator. In fact, reallocation offers the self-interested legislator a golden management opportunity. It permits the legislator to: (i) shift the responsibility for certain social services; (ii) claim credit for encouraging more efficient delivery of needed social services; and (iii) avoid accountability for any unfavorable consequences" (Knauer, 2010, p. 976).

Although public agents may be budget-maximizers (Niskanen, 1971), governments often face institutional rules and restrictions from citizen-imposed tax and expenditure limitations (TELs), balanced budget legislation, and referendum requirements for tax or spending proposals, which constrain the budgetary authority of public agents (Mullins & Wallin, 2004). On the other hand, tax expenditures, which are simply the estimated real cost of tax deductions and exemptions inherent in a government's tax system legislation, are not considered direct spending or taxation. Therefore, they are not subjected to the same rules and restrictions such as TELs and referendum requirements imposed by citizens. In fact, tax expenditures are often invisible to the median voter, even though they present a real cost for government service provision. Although less efficient from an economic standpoint, government agents are not necessarily interested in eliminating tax exemptions for nonprofit charities because tax-supported service provision by charities might provide government officials with greater budgetary flexibility. This is especially relevant when the perceived costs of a policy decision are widely distributed across the tax base but the perceived benefits are concentrated (Wilson & DiIulio, 1995).

Current research holds that nonprofit charities and governments often develop collaborative relationships that are interdependent (Gazley & Brudney, 2007; Jang & Feiock, 2007; Salamon & Toepler, 2015). In this context, we expect governments to strategically use the charitable sector as providers of certain public goods and services due to their expertise in an area, perceived cost savings, or other budget maximizing incentives (Knauer, 2010). If a charitable service provider is already providing some public good at a level demanded by the public, government expenditures are not needed. Even if public demand is not being fully satiated, fewer government expenditures are needed to provide the public good than in the absence of charitable provision. In light of this theoretical framework we have explained, our primary research question is whether direct government spending changes in connection with spending by incorporated public charities.

Model Specification and Data

To address this research question, we use a typical cost model (DiPasquale & Wheaton, 1996; O'Sullivan, 2003) to estimate combined state–local government expenditures as a function of vectors of variables measuring the cost of providing public services (*C*), the division of service responsibility (*D*) between overlapping governments (in this case state-local vs. federal), and services demanded by citizen voters (*S*), as shown in equation 1.

$$EXP_{it} = \alpha + C_{it}\beta_1 + D_{it}\beta_2 + S_{it}\beta_3 + \varepsilon_{it} \quad (1)$$

Government expenditures (*EXP*) are measured as aggregate direct expenditures. This measure includes both operating and capital expenditures (but excludes intergovernmental transfers) of the state government and all sub-state general-purpose, special-purpose, and independent school district governments within the state. Total expenditures are then divided by state population to scale the measure on a per capita basis. Each state–local per capita aggregate (*i*) for each year (*t*) during 1989–2006 is our unit of analysis. The time period of analysis represents the complete time frame for which all data are available. All financial data were adjusted for inflation using the Consumer Price Index. This measure captures all government spending within a state geography and comprehensively measures total government provision of services within states each year regardless of which government unit is providing it. Data for this variable were obtained from the Census of Governments Survey conducted by the U.S. Census Bureau.

We capture the cost of providing public services (vector *C* in equation 1) and the division of service responsibility between overlapping governments (vector *D* in equation 1) with variables measuring net federal receipts to state–local governments and the federal tax burden of citizens within each state–local government, respectively. Net federal receipts measure the cost of receiving federal intergovernmental revenue relative to taxes paid by residents of each state geography. Values greater than $1 indicate a cost for receiving federal income, as residents of those states are subsidizing states in which residents pay less than $1 for an equivalent amount of federal aid received. In the former, it is costlier to expand public service provisions through the use of income from the federal government. Our regression models all also include a series of year-fixed effects to capture variation in general price levels that occur over time and affect the cost of providing public services among state geographies equally but do not vary between state geographies, as does the net federal receipts variable. Federal tax burden is the amount of federal tax revenue derived from residents of a state geography divided by total personal income of residents within that state's geography. A higher federal tax burden presumes greater responsibility for service provision at the federal level versus at the state and local levels of

Table 1. Variable Definitions

Variable Names	Variable Descriptions and Sources
Dependent Variable	
General Government Expenditures	Aggregate state-local direct expenditures (i.e. total general expenditures minus intergovernmental transfers) divided by state population; Source: U.S. Census Bureau; Author Calculations.
Cost of Providing Public Services	
Net Federal Receipts	Amount of federal spending received per dollar of tax paid by residents of a state; Source: Tax Foundation.
Division of Service Responsibility	
Federal Tax Burden	Total federal tax revenue derived from residents of a state divided by total personal income of residents within a state; Sources: U.S. Census Bureau and U.S. Department of Commerce.
Private GSP	Total gross domestic product by state for all NAICS industry sectors except for the government sector divided by total state population; Sources: U.S. Census Bureau and U.S. Department of Commerce.
Demand for Public Services	
Nonprofit Charity Expenses	Total expenses (line 17) of nonprofit charities located in each state; Source: Form 990s Core Files from the National Center for Charitable Statistics, calculated by authors.
Nonprofit Charity Expenses, Net Government Grants	Total expenses (line 17) of nonprofit charities located in each state less government grants (line 1c); Source: Form 990s Statistics of Income Files from the National Center for Charitable Statistics, calculated by authors.
Nonprofit Charity Expenses, Net Grants & Contracts[1]	Total expenses (line 17) of nonprofit charities located in each state less government grants (line 1c) and less fees and contracts from government agencies (line 93g); Source: Form 990s Statistics of Income Files from the National Center for Charitable Statistics, calculated by authors.
Citizen Ideology	State citizen ideology scores indexed on a 100-point scale with increasing values indicating greater liberalism; Source: Berry, Ringquist, Fording and Hanson (1998) revised 1960-2006 citizen ideology series.
Government Ideology	State government ideology scores indexed on a 100-point scale with increasing values indicating greater liberalism; Source: Berry et al. (1998) revised 1960-2006 government ideology series.
Percent H.S. Diploma	Proportion of state population aged 25 years and older completing four or more years of high school; Source: U.S. Census Bureau.
Percent College Degree	Proportion of state population aged 25 years and older completing four or more years of college; Source: U.S. Census Bureau.
Unemployment Rate	Twelve-month average of the monthly proportion of state residents who were available and actively seeking work, but were not employed; Source: Bureau of Labor Statistics.
Percent Uninsured	Proportion of total state population without private or public health insurance coverage; Source: U.S. Census Bureau.

Homeownership Rate	Proportion of total households within the state that are occupied by owners; Source: U.S. Bureau of the Census.
Grade 4 Reading Scale	Average scores on 0-500 scale for reading of all grade 4 students within a state; Source: National Center for Education Statistics.
State Park Acreage	Total acreage of state parks and recreation areas by state; Source: National Association of State Park Directors.
Violent Crime Rate	Total number of violent crimes reported in a state per 100,000 state population; Source: U.S. Department of Justice.
Total Population	Number of state residents; Source: U.S. Census Bureau.

governments within the state, all else equal. In addition, we include a variable measuring the per capita amount of gross state product derived from the private sector to control for crowding out of the private sector and exogenous economic circumstances in a state geography.

The types and services demanded of state–local governments by citizen voters (vector *S* in equation 1) are controlled for with the variables shown in table 1. Of greatest interest for our study is spending by nonprofit charities. To develop a state-geography aggregate measure of charitable spending, we use data from the Return of Organization Exempt from Income Tax (IRS Form 990) compiled and made publicly available by the National Center for Charitable Statistics (NCCS). The Internal Revenue Service (IRS) requires each registered nonreligious charitable nonprofit in the U.S. grossing over $25,000[4] in revenue to file a Form 990 annually. Similar to the Census of Governments survey data, these data are the most comprehensive nationwide source of nonprofit charities' finance information.[5]

We measure charitable spending in three ways for the reasons discussed below: 1) nonprofit charity total expenses; 2) nonprofit charity expenses, net of grant income received from government sources; and 3) nonprofit charity expenses, net of grant and contract income from government sources. Each measure is calculated as the aggregate amounts of expenses and/or grant/contract income for all nonreligious nonprofit charities that filed IRS Form 990 each year within each state geography. We also divide these total expenses by the same measure of state population used to calculate per capita values of our dependent variable for purposes of scaling and comparability. To do this, we aggregated organization-level data to the state geography by summing values of relevant financial information based upon the address reported by nonprofit charities on IRS Form 990 and FIPS codes that indicate the state domicile of each organization. Existing research shows the nonprofit charity sector is overwhelmingly community-based and locally oriented, such that both charitable financing and spending for service provision primarily occur within state borders (Bielefeld & Murdoch, 2004; Bielefeld, Murdoch, & Waddell, 1997; Calabrese, 2011; Downs & Greenstein, 1996; DeVita, Manjarraz, & Twombly, 1999).

[4]The $25,000 minimum requirement was the rule during the time period of our data; the current minimum gross revenue for required IRS Form 990 filing is $50,000.

[5] There are concerns about using the 990 data. Many of these concerns focus on allocations between programs and overhead, how unrealized gains or losses are accounted for, the timeliness of filings, and annual change in net assets (Gordon, Khumawala, Kraut, & Meade, 2007). These concerns are less relevant for the data employed in our empirical strategy because the analyses rely upon aggregate (rather than organizational) data. Thus, the effect from an individual error is minimized. In addition, the patterns of these errors are relatively random. As such, most studies have found these data to be reliable sources of information for nonprofit finance (Carroll & Stater, 2009; Froelich, Knoepfle, & Pollak, 2000).

Because our dependent variable of state–local government expenditures includes all spending by governmental units within a state geography, it is necessary to remove from our independent variable of charitable spending all income derived from grants and contracts awarded by governments. Otherwise, charitable spending likely includes resources accounted for simultaneously in government spending. To do this, we use data from two different data sets provided by the NCCS for constructing the independent variables. Our first measure of charitable spending, which does not subtract government grants and contracts income to nonprofit charities, is derived from the Core file and is simply total annual expenses. The Core file includes all registered nonprofit charities required to file IRS Form 990, but the data include very few variables for analysis. Although this measure of charitable spending is imperfect, it allows us to empirically test data from 1989 through 2006 on nearly all nonprofit charities that exist; therefore, this measure most comprehensively captures spending by the entire nonprofit charity sector, so we use it simply as a benchmark for our other two measures.

To construct our second measure of charitable expenses, which nets out grant income from government sources,[6] we rely upon the Statistics of Income (SOI) file, which is weighted toward larger nonprofit charities. Although we lose observations of smaller nonprofit charities by using this data set, we are still able to capture the majority of aggregate spending by nonprofit charities in the sector. In addition, we are still able to analyze data from 1989 through 2006 by using this data.

Our third measure of charitable expenses, which nets out both government grants and earned income from government contracts,[7] also is calculated using the SOI file. However, the data on government contract revenue is only available beginning in 2000. Therefore, while the third measure of charitable spending is arguably the most proper for our analysis, its use drastically reduces the time period and sample size of our panel. We believe the longer time frame available with our other two measures of charitable spending allows us to provide better estimates of the factors that correlate with government spending within states over time. However, examining the nuances and consistencies of results from all three specifications will enable us to draw better overall conclusions from our findings. Complete descriptions of all variables and data sources can be found in table 1.

Descriptive Statistics

Descriptive statistics for all variables are shown in table 2. Means and standard deviations are shown for the entire time period of this study (1989–2006). However, because it is impossible to subtract government contract income from charitable spending prior to 2000, we also provide means and standard deviations for all variables for the years 2000–2006 separately to allow for strict comparison.

Referring only to the variables of greatest interest, table 2 shows that, on average, state and local governments spend nearly double the amount of nonprofit charities. Between 1989 and 2006, state and local direct expenditures, including both operating and capital spending but excluding intergovernmental transfers, amounted to an average of $4,888 per capita; during 2000–2006, expenditures by state and local governments were on average greater at $5,403 per person.

---

[6]Government grants are defined using Line 1c from Part I of the Form 990.

[7]Revenue from government contracts is defined using Line 93g from Part VII of the Form 990. This does not include Medicare or Medicaid revenue, which the NCCS believes to be consistently misreported on the Form 990.

Table 2. Descriptive Statistics

	1989-2006		2000-2006	
Variable Names	Mean	Standard Deviation	Mean	Standard Deviation
Dependent Variable				
General Government Expenditures	$4,887.95	$1,350.07	$5,403.20	$1,230.39
Cost of Providing Public Services				
Net Federal Receipts	$1.13	$0.30	$1.17	$0.35
Division of Service Responsibility				
Federal Tax Burden	20.34%	1.72%	19.95%	2.07%
Private GSP	$16,546.27	$15,433.38	$30,280.98	$5,949.76
Demand for Public Services				
Nonprofit Charity Expenses	$2,354.36	$1,254.29	$2,817.20	$1,349.11
Nonprofit Charity Expenses, Net Govt. Grants	$2,272.94	$1,199.23	$2,711.03	$1,290.32
Nonprofit Charity Expenses, Net Grants & Contracts[1]	N/A	N/A	$2,693.15	$1,278.00
Citizen Ideology	48.94	14.60	49.93	15.49
Government Ideology	48.32	25.26	46.70	26.64
Percent H.S. Diploma	83.23%	5.34%	85.86%	3.81%
Percent College Degree	23.63%	4.94%	26.10%	4.67%
Unemployment Rate	5.13%	1.39%	4.80%	1.13%
Percent Uninsured	12.56%	4.15%	12.67%	4.01%
Homeownership Rate	68.21%	5.50%	70.33%	4.99%
Grade 4 Reading Scale	216.80	7.58	218.33	6.58
State Park Acreage	250.83	494.00	269.56	521.12
Violent Crime Rate	476.84	241.95	411.56	181.09
Total Population	5,426,034	5,954,529	5,800,347	6,380,956
	N = 900 (i=50; t=18)		N = 350 (i=50; t=7)	

[1] This variable is only observed for years 2000-2006 (N = 350); due to data availability, it is not possible to remove government contracts from charitable spending prior to 2000. The means for nonprofit charity spending and nonprofit charity spending, net of govt. grants for 2000-2006 are $2,817.18 and $2,711.03, respectively, which are more comparable to the mean for nonprofit charity spending, net of grants and contracts.

During this latter time period, average per capita expenses of nonprofit charities, net of government grant and contract income, only amounted to $2,693. For the earlier time period of 1989–2006, charitable spending, net of government grant income, only averaged 46.5% of government expenditures with a per capita mean of $2,273.

Table 2 also reveals less variation for government expenditures than for charitable expenses as measured by the standard deviations. Finally, table 2 shows patterns of spending for nonprofit charities that suggests at least some connection with government income received by these organizations. For both time periods, as income from government sources is subtracted from total expenses, the mean per capita values consistently decline. If government funding of nonprofit charities has no implications for this sector of charitable spending, we would likely see no such trend. However, our interpretation of these descriptive statistics is that government grants and contracts act as an impetus, at least to some extent, for spending in particular areas of the nonprofit charity sector. Not only does this preliminary evidence present a valid case for future research, it also reiterates our initial assumption of potential endogeneity between

government and charitable spending. The next section explains the precautions we have taken for proper model estimation to analyze our primary research question.

Model Estimation

Prior to running any regression, several estimation issues were identified and addressed. First, we conducted Hausman specification tests, which indicated that a fixed effects estimator would provide consistent results for estimating equation 1 using any of the three measures of charitable spending.[8] As a result, we proceeded by testing for heteroskedasticity using the Modified Wald test for group-wise heteroskedasticity in a fixed-effect regression model. Although the presence of heteroskedasticity would not bias our results, it does make our estimators inefficient. These tests indicated the presence of heteroskedasticity in model specifications using all three measures of charitable spending.[9] Therefore, to avoid using an estimator that is not fully efficient and to ensure the robustness of the remaining specification test statistics (Cameron & Trivedi, 2010), the Huber–White sandwich estimator of the variance was used to produce heteroskedasticity-robust standard errors except where cluster-robust standard errors are indicated.

As previously explained, due to extant research, we assume our measures of charitable spending are endogenous or correlated with the error term and therefore might make our estimators inconsistent. While using an instrumental-variables (IV) approach would provide a consistent estimator, it only does so under the assumption that valid instruments exist (Cameron & Trivedi, 2010). Typically, lagged values of endogenous variables are predetermined and are treated as exogenous variables because they are given constants for determination of the current time period's values of the endogenous variables (Kennedy, 1998). Using lagged values as instrumental variables is only valid, however, if the model specification is not correlated over time. Therefore, we used the Wooldridge test for autocorrelation in panel data to test for the presence of serial correlation. These tests yielded F-test statistic values of 2.90 (Prob > F = 0.09) using nonprofit charities' total expenses to measure charitable spending, 3.02 (Prob > F = 0.09) using nonprofit charities' expenses net of grant income received from government sources, and 2.04 (Prob > F = 0.16) using nonprofit charities' expenses net of grant and contract income from government sources. Because we failed to reject the null hypothesis of no first-order autocorrelation in all three specification tests using a 95% confidence level, using one-year lags of each of our three charitable spending variables as instruments should produce consistent estimators for each specification as suggested by Wooldridge (2006).

Regression Results

Table 3 provides the regression results of the three model specifications related to each different measure of charitable spending for purposes of comparison. All three specifications use the same dependent variable of per capita direct government expenditures as well as independent variables to control for citizen demand for public services, cost of providing public services, and the division of service responsibility between state–local governments and the federal government. As noted earlier, these categories of results are representative of a typical cost model (DiPasquale & Wheaton, 1996; O'Sullivan, 2003). In addition, we selected one exogenous

[8] Chi-square test statistics range from 62.52 to 110.99; Prob > chi-square = 0.00 for all three tests.
[9] Chi-square test statistics range from 804.35 to 2505.63; Prob > chi-square = 0.00 for all three tests.

Table 3. Overall Regression Results

Variable Names	Nonprofit Charity Expenses	Nonprofit Charity Expenses, Net Govt. Grants	Nonprofit Charity Expenses, Net Grants & Contracts
Cost of Providing Public Services			
Net Federal Receipts	-635.2203	-625.6788	-522.9113
Division of Service Responsibility			
Federal Tax Burden	-146.9389***	-146.9464***	-240.7272**
Private GSP	-0.0058	-0.0057	0.0309
Demand for Public Services			
Nonprofit Charity Spending$_{t-1}$	0.0584***	0.0612***	0.1193***
Citizen Ideology	-1.0437	-1.1350	-6.4284
Government Ideology	2.8045**	2.8028**	1.6389
Percent H.S. Diploma	23.6278**	23.5213**	17.9290
Percent College Degree	-3.6438	-3.7920	-8.5486
Unemployment Rate	3.7575	3.4186	-5.6093
Percent Uninsured	-17.4483***	-17.3252***	-10.2537
Homeownership Rate	-18.3226*	-18.0572*	21.5078
Grade 4 Reading Scale	5.3770	5.2422	34.0877*
State Park Acreage	0.2412	0.2477	-0.2247
Violent Crime Rate	-0.4152	-0.4156	-3.0842**
Total Population	0.0000	0.0000	-0.0003***
Constant	7,377.00***	7,384.56***	2,864.70
N	850	850	300
F	65.23***	66.25***	31.07***
Within R^2	0.7777	0.7779	0.5132
AIC	11,900.00	11,900.00	4,237.24
BIC	12,100.00	12,100.00	4,311.31

* p<0.10; ** p<0.05; *** p<0.01

Note: All models incorporate two-way (i.e. year and state) fixed effects and standard errors clustered by state. All nonprofit charity spending variables are measured at t-1.

independent variable to represent citizen demand that directly corresponds to the functional expenditure categories of government spending that are included in our data.

Perhaps most striking from table 3 is the consistency of results both in terms of directional correlation and magnitude of coefficients between the various model specifications. Unsurprisingly, the regression models with the larger sample size that span a longer period of time are a better fit for the data and provide greater explanatory power. Nonetheless, the coefficient signs and results of hypothesis testing are consistent throughout all models. As expected, the results show that factors influencing citizen demand for public services such as education levels and insurance coverage significantly correlate with government spending. In addition, the liberalism of government officials within a state is positively associated with charitable spending, which is not unexpected because Democrats are typically associated with preferences for higher spending than their more conservative Republican counterparts. Finally, the federal portion of tax burden imposed upon residents within state geographies has a relatively large correlation with spending by state–local governments, suggesting the division of service provision responsibility between state–local governments and the federal government is perhaps the most important factor.

Focusing on the primary research question of this study, table 3 shows a consistently positive correlation between government and charitable spending, which is statistically significant at the 99% confidence level or above for all model specifications. According to the results, states with nonprofit charities that spend $1 per capita more than their counterparts located in average states are generally associated with state–local government expenditures that are between an average of 6 and 12 cents higher per capita over time. Using the descriptive statistics in Table 2, the results in Table 3 indicate that a state in which nonprofit charities have aggregate charitable expenses net of grant income from government sources of $12,333,049,720, or $5,426,034 higher[10] than the average state, direct expenditures of state and local governments within this above-average state should generally be $332,073 higher[11] as well. If these above-average expenditures were fully supported by tax revenue, state residents would face a state–local tax burden that is 6 cents[12] higher than for citizens located in average states.

While these amounts may seem small, consider a state in which charitable spending is one standard deviation higher per capita than the average state rather than only $1 per capita higher. In such a state, nonprofit charities' aggregate expenses, net of grant income from government sources, would be $6,507,062,754 higher[13] than the average state, and state-local government direct expenditures would be $398,232,241 higher[14] than states with average amounts of charitable spending. Financing these additional government expenditures solely with tax revenue would amount to a state–local tax burden for residents that is $73.39 higher[15] than what citizens would pay in average states. Because these values are on a per capita basis, a family of four would be faced with a tax bill that is $293.56 higher than that of families residing in average states.

The results in table 3 pertaining to nonprofit charities' expenses, net of both government grants and contracts are even more pronounced. With the exclusion of charitable spending that directly results from all income from government sources, states with nonprofit charities that expend $1 per capita above those in average states, which would amount to $5,800,347 greater[16] charitable spending on average, would have $691,981 more direct expenditures by state and local governments than average states. This would amount to an additional tax burden of approximately 12 cents per resident of these above-average states if the additional state–local government expenditures were financed solely through taxation. States with the same types of charitable spending of one standard deviation per capita more than average states, totaling $7,412,866,667 above the average, would be associated with government spending by state and local governments, which is $884,354,993 higher on average over time. Such state residents

---

[10]Calculated as $2,272.94 (the mean nonprofit charity expenses net of government grants from table 2) * 5,426,034 (the mean population for 1989–2006) = $12,333,049,720; increasing average charitable spending by $1 per capita implies increasing total spending by $5,426,034.

[11]Calculated as the coefficient 0.0612 (for lagged nonprofit charity expenses, net government grants in table 3) * $5,426,034 (the calculated total charitable spending increase) = $332,073.

[12] Calculated as $332,073 (the calculated higher total spending of state-local governments of an above-average state) / 5,426,034 (the mean population for 1989–2006).

[13]Calculated as $1,199.23 (the standard deviation of nonprofit charity expenses, net government grants from table 2) * 5,426,034 (the mean population for 1989–2006) = $6,507,062,754.

[14]Calculated as the coefficient 0.0612 (for lagged nonprofit charity expenses, net government grants in table 3) * $6,507,062,754 (the calculated total charitable spending increase) = $398,232,241.

[15]Calculated as $398,232,241 (the calculated higher total spending of state-local governments of an above-average state) / 5,426,034 (the mean population for 1989–2006).

[16]The numbers cited in the remainder of this section were calculated using the same method explained in footnotes 12-17, except using data from tables 2 and 3 pertaining to nonprofit charity expenses, net of grants and contracts, and population values for 2000–2006.

Table 4. Government Functional Expenditure and Nonprofit Charity Mission Area

Government Functional Expenditure Category	Nonprofit Charity Mission Area and NTEE Code
Corrections	Advocacy and Support Organizations (I01-I19), Correctional Facilities (I30), Rehabilitation Services (I40), Crime and Legal Related NEC (I29)
Education	Elementary and Secondary Schools (B20), Vocational and Technical Schools (B30), Educational Services (B90), Higher Education (B40), Graduate and Professional Schools (B50), Adult Education (B60), Student Services (B80), Education, NEC (All Other B Codes)
Employment Security Administration	Advocacy and Support Organizations (J01-J19), Employment Preparation and Procurement (J20), Vocational Rehabilitation (J30), Employment NEC (J99)
Judicial and Legal	Legal Services (I80)
Health	Reproductive Health Care (E40), Rehabilitation Care (E50), Health Support (E60), Public Health (E70), General Health (E80), Nursing (E90), Health NEC (E99), All Mental Health Except F30 (F01-F20; F40-F99), Diseases, Disorders and Medical Disciplines (G), Medical Research (H)
Hospitals	Hospitals (E20), Ambulatory and Primary Health Care (E30), Mental Health Treatment (F30)
Housing and Community Development	Housing and Shelter (L); Community Improvement & Capacity Building (S)
Libraries	Libraries (B70)
Parks and Recreation	Recreation and Sports (N)
Police	Law Enforcement (I60), Crime Prevention (I20), Administration of Justice (I50), Protection against Abuse (I70), Public Safety, Disaster Preparedness and Relief (M)
Public Welfare	Youth Development (O), Human Services (P)

Note: NEC = Not Elsewhere Classified

might see a relatedly higher tax burden of $153 (or $612 for a family of four) compared with citizens residing in average states. A direct implication of these findings is a tighter budget constraint for individuals and families residing in states with greater spending by the charitable nonprofit sector, regardless of whether or not they receive such services.

Overall, our results imply that nonprofit charities have a nontrivial positive correlation with government spending. These results are inconsistent with government failure theory, which suggests that nonprofit charities provide services to address unmet service demands of those above the median voter. In such a case, we would expect to see no correlation between nonprofit charities and government spending because nonprofit charities would provide services beyond the government's ability or willingness to do so. Rather, our results lend empirical support to the rent-seeking theory outlined above. The results suggest that as nonprofit charities' activities increase, the sectors become interdependent and nonprofit charities, similar to an interest group, develop strong preferences for increased government spending on goods and services. As a result, we see a positive correlation between the two sectors' spending patterns.

Regression Results by Nonprofit Charity Mission Area

Next, we analyze whether the activities of nonprofit charities among sectors are associated with governments altering their own spending on corresponding functional expenditure areas. To explore this issue, we identified 11 categories of service provision for which spending by both state–local governments and nonprofit charities overlap, as shown in table 4. The left-hand side of table 4 provides the functional expenditure categories used to classify state and local government spending, as reported in the Census of Governments survey. The right-hand side of table 4 provides our matching of these government functional expenditure categories to nonprofit charity mission areas, as reported in IRS Form 990, using IRS National Taxonomy of Exempt Entity (NTEE) codes. The service provision categories we were able to identify as overlapping for both sectors are corrections, education, employment, judicial and legal, health, hospitals, housing and community development, libraries, parks and recreation, police, and public welfare. To analyze the potential correlation between government and charitable spending by service provision category, we disaggregated our dependent variable of state–local per capita direct expenditures and our three independent variables measuring nonprofit charities' expenses (i.e., total expenses; expenses net of government grants; and expenses net of government grants and contracts) into these comparable functional expense categories and mission areas. Spending comparisons between the two sectors by category are shown in table 5.

As can be seen in table 5, the largest service provision category is education with state–local governments spending $1,931 per capita on average, and mean values for charitable expenses ranging from $409 to $446. Unsurprisingly, the next highest spending categories are public welfare, hospitals, and health. State–local government expenditures average $960 per capita for public welfare, $249 per capita for hospitals, and $173 per capita for health services. Similarly, nonprofit charities' per capita expenses, net of all government income, average $236 for public welfare, $66 for hospitals, and $118 for health.

At the low end of the spending spectrum, state–local government expenditures are lowest, on average, for the largely federal responsibility of employment security administration and libraries at $18 and $20 per capita, respectively. Nonprofit charities, on average, spend the least amounts, net of both grant and contract income from government sources, on the traditional governmental responsibilities of corrections, judicial and legal services, police, and libraries with only $2, $4, $4, and $3 per capita, respectively. Corrections, police, and legal services also

represent the largest differentials between the two sectors with nonprofit charities only spending 1.44%, 2.61%, and 4.11%, respectively, on average, of the average amounts spent by state-local governments. The smallest differential between the two sectors is in housing and community development, in which nonprofit charities spend nearly 74%, on average, of what state and local governments expend.

Table 6 provides coefficient values for a series of regression analyses of government and charitable spending by service provision area. Each number in table 6 is the product of a unique regression model that utilizes the three charitable spending measures defined earlier.[17] These are indicated by the column headings, for each overlapping service area, for all service types, or for those categories of service provision in which there is no crossover between nonprofit charities' mission areas and government functional expenditure categories reported in our

[17]Again, all measures of charitable spending were lagged one year to overcome potential endogeneity.

Table 5. Per Capita Government and Nonprofit Charity Spending by Service Provision Category

Service Provision Areas	State-Local Government Expenditures		Nonprofit Charity Expenses		Nonprofit Charity Expenses, Net Govt. Grants		Nonprofit Charity Expenses, Net Grants & Contracts	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
All Areas	$5,403.20	$1,230.39	$2,817.20	$1,349.11	$2,711.03	$1,290.32	$2,693.15	$1,278.00
Corrections	$156.42	$46.57	$2.31	$2.42	$2.27	$2.40	$2.26	$2.36
Education	$1,931.42	$307.17	$446.07	$386.36	$412.24	$347.00	$408.63	$343.46
Employment	$17.90	$10.90	$12.64	$10.03	$12.03	$9.34	$11.86	$9.06
Legal	$88.14	$33.65	$3.84	$2.71	$3.70	$2.70	$3.62	$2.54
Health	$172.75	$69.83	$125.44	$118.49	$119.31	$111.57	$118.46	$110.97
Hospitals	$248.76	$169.33	$70.16	$63.37	$66.92	$61.73	$66.04	$62.10
Housing	$81.16	$44.88	$63.39	$30.96	$59.90	$28.13	$59.73	$28.08
Libraries	$20.08	$8.00	$3.85	$6.51	$3.25	$5.16	$3.25	$5.16
Parks & Recreation	$79.63	$36.64	$24.83	$26.80	$24.69	$26.38	$24.68	$26.38
Police	$159.66	$51.06	$4.40	$4.96	$4.18	$4.64	$4.16	$4.63
Public Welfare	$959.51	$282.37	$254.54	$115.14	$240.63	$105.31	$235.56	$100.86
No Crossover	$1,487.76	$742.51	$1,805.72	$896.90	$1,761.93	$887.12	$1,754.89	$883.93

Note: All statistics were calculated for years 2000-2006 for comparison purposes.

Table 6. Categorical Regression Results

Service Provision Areas	Nonprofit Charity Expenses	Nonprofit Charity Expenses, Net Govt. Grants	Nonprofit Charity Expenses, Net Grants & Contracts
All Areas	0.0584***	0.0612***	0.1193***
Corrections	-0.0102	0.0023	-0.8321
Education	-0.0456	-0.0737	0.3482*
Employment	-0.0319	-0.0104	-0.1025
Legal	1.3378***	1.2247**	1.2247**
Health	-0.0203	-0.0311	-0.1305
Hospitals	-0.0665	-0.0793	0.1425
Housing	0.1294	0.0725	0.0948
Libraries	0.1979**	0.1728*	0.1805*
Parks & Recreation	-0.0348	-0.0371	0.0245
Police	0.3183	0.5533	1.0613
Public Welfare	0.4024***	0.3972**	0.6947*
No Crossover	0.0097	0.0149	0.0093

* p<0.10; ** p<0.05; *** p<0.01

Note: All models incorporate two-way (i.e. year and state) fixed effects and standard errors clustered by state. All nonprofit charity spending variables are measured at *t-1*.

data.[18] Across the service provision areas, per capita state–local government expenditures pertaining only to those functional expenditure categories were used in calculating the dependent variables. Thus, for example, the row labeled "Legal" reports the results of three different regression models, all of which use state–local aggregate direct expenditures for the judicial and legal functional expenditure category only and are measured on a per capita basis. Along the row, however, each regression utilizes a different measure of charitable expenses, which is consistent with our three measures for the overall analysis, indicated by the column headings. These spending values were calculated by aggregating total expenses for only those nonprofit charities within a given state in a given year that report on their IRS Form 990 that their primary mission area falls within legal services or NTEE code I80 and are also measured on a per capita basis. Thus, all three specifications are different but relevant only to judicial and legal services.

The numbers across each row are the coefficient values with stars indicating the significance levels related to the charitable spending independent variables. The results for all other variables are not included for space and clarity concerns. All regressions were estimated using the exact same procedures and control variables explained above for analyzing total government and charitable spending. It should be noted that all of the regression models that produced the coefficient values illustrated in Table 6 were statistically significant at the 99% confidence level or above.[19]

We believe table 6 shows some interesting patterns. It is obvious at first glance that there is a correlation between government and charitable spending for some service provision areas – but not others. Specifically, it appears that the positive and statistically significant correlation we found earlier between government and charitable spending is primarily driven by spending on

[18]Nonprofit charity NTEE codes with no corresponding state or local spending function included arts, food and nutrition, international affairs, civil rights and advocacy, philanthropy, science and technology, social science, public and societal benefit, religiously related, and mutual/membership organizations.

[19]F-test statistics range from 3.07 to 107.90; Prob > F = 0.00.

judicial and legal services, libraries, and public welfare. This finding provides additional support for the rent-seeking theory of government-nonprofit charity relations in these service areas. Further, these results are supported even when all government grants and contracts are excluded from the analysis. Therefore, it is reasonable to conclude that this relationship is not simply reflecting government contracting with nonprofit charities.

According to the results, states in which nonprofit charities spend $1 per capita, which is approximately $5,800,347 more[20] than the average state on legal services, are generally associated with state-local direct expenditures for judicial and legal services that are at least $1.22 per capita or $7,103,685 higher[21] over time. A state with one standard deviation above average charitable spending on legal services, net of grant and contract income from government sources, which amounts to $14,732,881, would[22] be associated with state–local government spending in that state of $18,043,360 higher[23] over time than the average state. The amount has the potential to translate into an additional tax burden of $3.11 for each resident[24] of that state.

States with $1 per capita above-average expenses of nonprofit charities with primary mission areas in library and public welfare services would be associated with per capita spending for those functions that are 18 cents[25] and nearly 70 cents, respectively, higher over time than average states. If nonprofit charities providing library and public welfare services in a state had expenses, net of grant and contract income from government sources, for these services of one standard deviation above their counterparts in average states, which would amount to $29,904,855 and $585,018,938, respectively, residents of those states might expect their state and local governments to expend approximately $5,397,826 and $406,412,656 more over time on these functions, respectively, than that of average states.

To support the additional government expenditure on public welfare through tax revenue, each citizen of an above-average state would need to pay $70 more in taxes. For a family of four residing in such a state, they would be required to subsidize public welfare by $280 more tax burden – and these calculations inherently assume the tax burden would be applied equally to the state's population like a flat tax. However, if the additional tax revenue is generated from progressive state income taxes, wealthier individuals would be subsidizing public welfare through their higher tax burdens to greater extent than residents of the same state who fall into lower income tax brackets or are exempt from state income taxes altogether.

Perhaps most interesting about these findings is that public welfare is one of the largest categories of public service provision for both state–local governments and nonprofit charities as measured by their expenditures and expenses, respectively. It appears, therefore, that

---

[20]Calculated as $1 * 5,800,347 (the mean population for 2000–2006).

[21] Calculated as the coefficient 1.22 (for lagged charitable judicial expenses, net of grants and contracts in table 6) * 5,800,347 (the calculated increase in charitable spending on legal services) = $7,103,685.

[22] Calculated as $2.54 (the standard deviation of charitable legal expenses, net of grants and contracts in table 5) * 5,800,347 (the mean population for 2000–2006).

[23] Calculated as the coefficient 1.2247 (for lagged charitable judicial expenses, net of grants and contracts in table 6) * $14,732,881.38 (the calculated increase in charitable spending on legal services).

[24]Calculated as $18,043,359.83 (the calculated higher total spending of state-local governments of an above-average state)/5,800,347 (the mean population for 2000–2006).

[25] The numbers cited in the remainder of this section were calculated using the same method explained in footnotes 20–24, except using data from tables 5 and 6 pertaining to the service provision areas relevant to the discussion.

charitable service provision of public welfare is associated with more government spending on public welfare, all else equal. Our theoretical explanation of nonprofit charities acting as political agents and advocating for increased government spending in this area seems reasonable and supported – perhaps as representatives of communities and citizens. These findings also are consistent with other findings provided by LeRoux (2007), Mosley (2012), and Smith and Pekkanen (2012). However, Young (2000) points out such advocacy may render nonprofit charities and governments as adversaries, further complicating the provision of public services. On this particular question, further research is certainly warranted.

On the other hand, legal services represent one of the smallest spending categories for nonprofit charities and one of the largest differentials in spending between state–local governments and nonprofit charities. Yet, the results show $1 of charitable spending is associated with more than $1 higher government spending. Whether this relationship reflects nonprofit charities successfully advocating for additional resources from the government, or whether nonprofit charities are able to draw significant resources from funders other than government, or even some other explanation, additional analysis on particular charitable subsectors seems warranted. We encourage other scholars to further explore these relationships and plan to do so ourselves in future research.

Aside from these results, what we find equally striking from table 6 is the lack of any statistically significant correlation between government and charitable spending for several service provision categories. Especially because many theories often presume an association between the government and nonprofit charity sectors, we believe these findings show no such correlation between government spending and several large and important nonprofit charity subsectors to be relevant and equally as intriguing as our statistically significant results. We interpret these findings as limited support for government failure theory, in that government and charitable service provision are likely independent.

For example, education is the single largest spending category for both state–local governments and nonprofit charities. Yet, the regression results show a rather weak correlation between the two sectors in providing this service. It is only when grant and contract revenue are both netted out of total expenses for nonprofit charities in this category that there is any statistically significant correlation between charitable expenses and state–local government expenditures – and the coefficient is only marginally significant at the 90% confidence level. We take these findings as caution against suggesting charitable spending on education is associated with government spending or vice versa. Perhaps if elementary/secondary education were analyzed separately from higher education, a more definitive pattern in the data could be identified. We certainly believe there is more work to be done in future research on this particular category of service provision. In addition, the categories of health and hospitals, which are also two of the largest spending categories for both the government and nonprofit charity sectors, exhibit no statistically significant correlation. Again, we take the lack of statistical significance to suggest that the services provided by each sector in these categories are not associated with those of the other sector and vice versa.

The only service area that displays a negative relationship is parks and recreation, and this is not consistent or significant across estimations. In this particular case, the results seem to suggest that government officials might strategically pull back government spending on these services if nonprofit charities provide them. Parks and recreation services have seen significant public–private partnerships in which private nonprofit charities have assumed operations of public

services for governments (Walker, 2004). Therefore, as charitable spending on Parks and Recreation increases, perhaps government spending declines in real terms.[26] More research in this particular area is needed, of course, to provide a definitive conclusion on the implications of public–private partnerships in parks and recreation services.

Overall, the results in table 3 suggest that charitable spending is associated with higher government spending, all else equal – which is consistent with rent-seeking behavior of nonprofit charities. However, when we break apart government and charitable spending into specific service areas, as in table 6, we see that this theory is supported in some important areas, perhaps most importantly in the area of public welfare, but not in others. Further, the results are consistent even when all government funds devoted to nonprofit charities are removed from the analysis. We find little empirical evidence that would support the notion that government agents strategically reduce spending in particular areas in which nonprofit charities are operating. Finally, the lack of relationship between government and charitable spending in many important service areas suggests that the two sectors often work independently of each other – which we interpret as empirical support for government failure theory.

Conclusion

In this paper, we articulated that rent-seeking behavior by nonprofit charities and budgetary discretionary behavior by public agents should lead to a positive correlation between nonprofit charity activity and government spending. Using a large national database of government spending that we merged with charitable spending, we empirically tested this question. Overall, we found a positive association between spending by both sectors, which is unequivocal and nontrivial, supporting the rent-seeking theory of nonprofit charities' behavior.

When we examined spending by the sectors by specific areas of service provision to determine public budgetary reallocation, our results indicate positive associations in legal and judicial services, libraries, and public welfare spending – supporting the rent-seeking explanation. We also found no correlation between spending by the two sectors in several important areas of service provision, including education, health, hospitals, and housing. The lack of correlation in these areas might be indicative of government failure theory rather than rent-seeking.

Importantly, the positive association between charitable and government spending suggests that public spending may increase beyond optimal levels – leading potentially to tax burdens that are greater than necessary, crowding out of private enterprise, and spending patterns that are difficult to alter in light of fiscal shocks. Further, nonprofit charities that become increasingly dependent upon government support may find themselves vulnerable when significant economic contractions require subnational governments to reduce spending to meet balanced budget requirements. Finally, we found evidence of direct government funding reductions in parks and recreation, which would support the notion of governments altering public budgets because of nonprofit charity activity.

Our results have important policy and management implications for governments as well as nonprofit charities. Obviously, both sectors respond to common citizen demands by providing public services. Understanding how these demands are met is important for predicting the size

[26] These reductions in government dollars for parks and recreation might be explicit or not. For example, some public–private relationships state that the nonprofit charities must find matching grants or private supporters. Whether explicit or not is irrelevant for the theory presented here.

of the government sector, resultant tax burdens, and both financial and voluntary contributions to the nonprofit charity sector. Our results, which found a correlation between charitable and government spending in some areas but not others, inform our understanding of how governments and nonprofit charities interact and react to each other. Multiple theories explain this complicated and ever-changing relationship. Here we add to this theoretical tradition by considering nonprofit charity rent-seeking behavior and public choice theory as it relates to government budget changes in light of charitable service provision.

Certainly, we do not consider this study the definitive word on the subject. Our intention was to provide the first large-scale study of spending by state-local governments and nonprofit charities to inform the direction of future research. While our analyses provide new knowledge on the topic at hand, we believe the research also elicits more questions for ourselves and other scholars to study in the future. Future research should try to isolate the relationship at an even more local level, given the focus of most nonprofit charities on communities and locations. Another critical avenue left to explore is whether or not this spending relationship holds equally for capital and operating expenditures. Perhaps separating such spending will motivate future inquiry into the sectors' spending dynamics.

Disclosure Statement

The authors declare that there are no conflicts of interest related to this research, authorship, or publication of this article.

References

Abrams, B. A., & Schmitz, M. D. (1984). The crowding-out effect of governmental transfers on private charitable contributions: Cross-section evidence. *National Tax Journal, 37*(4), 563-568.

Anderson, J. E. (2012). *Public finance*. Boston, MA: Cengage Learning.

Andreoni, J., & Payne, A. A. (2011). Is crowding out due entirely to fundraising? Evidence from a panel of charities. *Journal of Public Economics, 95*, 334-343. doi:10.1016/j.jpubeco.2010.11.011

Auten, G. E., Sieg, H., & Clotfelter, C. T. (2002). Charitable giving, income, and taxes: An analysis of panel data. *American Economic Review, 92,* 371-382. doi:10.1257/000282802760015793

Becker, E., & Lindsay, C. M. (1994). Does the government free ride? *Journal of Law and Economics, 37*, 277-296. doi:10.1086/467314

Berry, W. D., Ringquist, E. J., Fording, R. C., & Hanson, R. L. (1998). Measuring citizen and government ideology in the American states, 1960-93. *American Journal of Political Science, 42*, 327-348. doi:10.2307/2991759

Bielefeld, W. (2000). Metropolitan nonprofit sectors: Findings from NCCS data. *Nonprofit and Voluntary Sector Quarterly, 29*, 297-314. doi:10.1177/0899764000292005

Bielefeld, W., & Murdoch, J. C. (2004). The locations of nonprofit organizations and their for-profit counterparts: An exploratory analysis. *Nonprofit and Voluntary Sector Quarterly, 33*, 221-246. doi:10.1177/0899764003260589

Bielefeld, W., Murdoch J. C., & Waddell, P. (1997). The influence of demographics and distance on nonprofit location. *Nonprofit and Voluntary Sector Quarterly, 26*, 207-225. doi:10.1177/0899764097262007

Bises, B. (2000). Exemption or taxation for profits of non-profits? An answer from a model incorporating managerial discretion. *Public Choice*, *104*, 19-39. doi:10.1023/A:1005036514854

Bradley, R., Holden, S., & McClelland, R. (2005). A robust estimation of the effects of taxation on charitable contributions. *Contemporary Economic Policy*, *23*, 545-554. doi:10.1093/cep/byi040

Brooks, A. C. (2003). Do government subsidies to nonprofits crowd out donations or donors? *Public Finance Review*, *31*, 166-179. doi:10.1177/1091142102250328

Brooks, A. C. (2004). The effects of public policy on private charity. *Administration and Society*, *36*, 166-185. doi:10.1177/1091142102250328

Brooks, A. C. (2007). Income tax policy and charitable giving. *Journal of Policy Analysis and Management*, *26*, 599-612. doi:10.1177/0095399704263474

Buffardi, A. L., Pekkanen, R. J., & Smith, S. R. (2015). Shopping or specialization? Venue targeting among nonprofits engaged in advocacy. *Policy Studies Journal*, *43*, 188-206. doi:10.1111/psj.12090

Calabrese, T. D. (2011). Public mandates, market monitoring, and nonprofit financial disclosures. *Journal of Accounting and Public Policy*, *30*, 71-88. doi:10.1016/j.jaccpubpol.2010.09.007

Calabrese, T. D. (2013). Running on empty: The operating reserves of U.S. nonprofit organizations. *Nonprofit Management and Leadership*, *23*, 281-302. doi:10.1002/nml.21064

Cameron, C. C., & Trivedi, P. K. (2010). *Microeconomics Using Stata, Revised Edition*. College Station, TX: Stata Press.

Carroll, D. A., & Stater, K. J. (2009). Revenue diversification in nonprofit organizations: Does it lead to financial stability? *Journal of Public Administration Research and Theory*, *19*, 947-966. doi:10.1093/jopart/mun025

Clotfelter, C. T. (1980). Tax incentives and charitable giving: Evidence from a panel of taxpayers. *Journal of Public Economics*, *13*, 319-340. doi:10.1016/0047-2727(86)90009-5

DeVita, C. J., Manjarraz, C., & Twombly, E. C. (1999). *Organizations and neighborhood networks that strengthen families in the District of Columbia: Final report to the Annie E. Casey Foundation*. Washington, DC: The Urban Institute.

DiPasquale, D., & Wheaton, W. C. (1996). *Urban economics and real estate markets*. Englewood Cliffs, NJ: Prentice Hall.

Downs, T. A., & Greenstein, S. M. (1996). Understanding the supply decisions of nonprofits: Modeling the location of private schools. *RAND Journal of Economics*, *27*, 365-390. doi:10.2307/2555932

Feldstein, M. (1975). The income tax and charitable contributions: Part 1 – aggregate and distributional effects. *National Tax Journal*, *28*(1), 81-100.

Feldstein, M., & Clotfelter, C. (1976). Tax incentives and charitable contributions in the United States. *Journal of Public Economics*, *5*, 1-26. doi:10.1016/0047-2727(76)90058-x

Feldstein, M., & Taylor, A. (1976). The income tax and charitable contributions. *Econometrica*, *44*, 1201-1222. doi:10.2307/1914255

Ferris, J. M. (1998). The role of the nonprofit sector in a self-governing society: A view from the United States. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *9*, 137-151. doi:10.1023/a:1022048504194

Froelich, K. A., Knoepfle, T. W., & Pollak, T. H. (2000). Financial measures in nonprofit organization research: Comparing IRS 990 return and audited financial statement data. *Nonprofit and Voluntary Sector Quarterly*, *29*, 232-254. doi:10.1177/0899764000292002

Fyall, R. (2016). The power of nonprofits: Mechanisms for nonprofit policy influence. *Public Administration Review*, *76*, 938-948. doi:10.1111/puar.12550

Galle, B. D. (2011). The role of charity in a federal system. *William and Mary Law Review*, *53*, 777-851. doi:10.2139/ssrn.1473107

Gazley, B., & Brudney, J. L. (2007). The purpose (and perils) of government-nonprofit partnership. *Nonprofit and Voluntary Sector Quarterly*, *36*, 389-415. doi:10.1177/0899764006295997

Gordon, T., Khumawala, S. B., Kraut, M. A., & Meade, J. A. (2007). The quality and reliability of form 990 Data: Are users being misled. *Academy of Accounting and Financial Studies Journal*, *11*(Special Issue), 27-49.

Grønbjerg, K. A., & Paarlberg, L. (2001). Community variations in the size and scope of the nonprofit sector: Theory and preliminary findings. *Nonprofit and Voluntary Sector Quarterly*, *30*, 684-706. doi:10.1177/0899764001304004

Gruber, J., & Hungerman, D. (2007). Faith-based charity and crowd-out during the Great Depression. *Journal of Public Economics*, *91*, 1043-1069. doi:10.3386/w11332

Hager, M. A., Galaskiewicz, J., & Larson, J. A. (2004). Structural embeddedness and the liability of newness among nonprofit organizations. *Public Management Review*, *6*, 159-188. doi:10.1080/1471903042000189083

Handy, F., Seto, S., Wakaruk, A., Mersey, B., Mejia, A., & Copeland, L. (2010). The discerning consumer: Is nonprofit status a factor? *Nonprofit and Voluntary Sector Quarterly*, *39*, 866-883. doi:10.1177/0899764010362113

Hansmann, H. (1981). The rationale for exempting nonprofit organizations from corporate income taxation. *Yale Law Journal*, *91*, 54-100. doi:10.2307/795849

Holcombe, R. G. (1989). The median voter model in public choice theory. *Public Choice*, *61*, 115-125. doi:10.1007/bf00115658

Horne, C. S., Johnson, J. L., & Van Slyke, D. M. (2005). Do charitable donors know enough—and care enough—about government subsidies to affect private giving to nonprofit organizations? *Nonprofit and Voluntary Sector Quarterly*, *34*, 136-149. doi:10.1177/0899764004272192

Jang, H. S., & Feiock, R. C. (2007). Public versus private funding of nonprofit organizations: Implications for collaboration. *Public Performance and Management Review*, *31*, 174-190. doi:10.2753/pmr1530-9576310202

Kennedy, P. (1998). *A guide to econometrics*. Cambridge, MA: MIT Press.

Kingma, B. R. (1989). An accurate measurement of the crowd-out effect, income effect, and price effect for charitable contributions. *Journal of Political Economy*, *97*, 1197-1207. doi:10.1086/261649

Knauer, N. J. (2010). How charitable organizations influence federal tax policy: 'Rent-seeking' charities or virtuous politicians? Retrieved from Social Science Research Network: https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=888837

Lecy, J. D., & Van Slyke, D. M. (2013). Nonprofit sector growth and density: Testing theories of government support. *Journal of Public Administration Research and Theory*, *23*, 189-214. doi:10.1093/jopart/mus010

LeRoux, K. (2007). Nonprofits as civic intermediaries: The role of community-based organizations in promoting political participation. *Urban Affairs Review*, *42*, 410-422. doi:10.1177/1078087406292257

Luksetich, W. (2008). Government funding and nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, *37*, 434-442. doi:10.1177/0899764007310415

Matsunaga, Y., & Yamauchi, N. (2004). Is the government failure theory still relevant? A panel analysis using U.S. state level data. *Annals of Public and Cooperative Economics*, *75*, 227-263. doi:10.1111/j.1467-8292.2004.00251.x

Mosley, J. E. (2012). Keeping the lights on: How government funding concerns drive the advocacy agendas of nonprofit homeless service providers. *Journal of Public Administration Research and Theory, 22*, 841-866. doi:10.1093/jopart/mus003

Mullins, D. R., & Wallin, B. A. (2004). Tax and expenditure limitations: Introduction and overview. *Public Budgeting and Finance, 24*, 2-15. doi:10.1111/j.0275-1100.2004.00344.x

Niskanen, W. A. (1971). *Bureaucracy and representative government*. Piscataway, NJ: Transaction Publishers.

Olson, M. (1965). *The logic of collective action: Public goods and the theory of groups*. Cambridge, MA: Harvard University Press.

O'Sullivan, A. (2003). *Urban economics*. Boston, MA: McGraw-Hill.

Peck, L. R. (2008). Do antipoverty nonprofits locate where people need them? Evidence from a spatial analysis of Phoenix. *Nonprofit and Voluntary Sector Quarterly*, *37*, 138-151. doi:10.1177/0899764006298963

Roberts, R. D. (1984). A positive model of private charity and public transfers. *Journal of Political Economy*, *92*, 136-148. doi:10.1086/261212

Salamon, L. M., & Toepler, S. (2015). Government–nonprofit cooperation: Anomaly or necessity? *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *26*, 2155-2177. doi:10.1007/s11266-015-9651-6

Smith, S. E., & Grønbjerg, K. A. (2006). Scope and theory of government-nonprofit relations. In W. W. Powell & R. S. Steinbern (Eds.), *The nonprofit sector: A research Handbook* (2nd ed., pp. 221-242). New Haven, CT: Yale University Press.

Smith, S. R., & Pekkanen, R. (2012). Revisiting advocacy by non-profit organizations. *Voluntary Sector Review*, *3*, 35-49. doi:10.1332/204080512X632719

Thornton, J. P. (2014). Flypaper nonprofits: The impact of federal grant structure on nonprofit expenditure decisions. *Public Finance Review*, *42*, 176-198. doi:10.1177/1091142112446845

Tiebout, C. M. (1956). A pure theory of local expenditures. *Journal of Political Economy*, *64*, 416-424. doi:10.1086/257839

Twombly, E. C. (2003). What factors affect the entry and exit of nonprofit human service organizations in metropolitan areas? *Nonprofit and Voluntary Sector Quarterly*, *32*, 211-235. doi:10.1177/0899764003032002003

Walker, C. (2004). *The public value of urban parks*. Washington, DC: Urban Institute.

Weisbrod, B. A. (1977). *The voluntary nonprofit sector: An economic analysis*. Lexington, MA: Lexington Books.

Wilson, J. Q. (1989). *Bureaucracy: What government agencies do and why they do it?* New York, NY: Basic Books.

Wilson, J. Q., & DiIulio, J. J. (1995). *American government: Institutions and policies*. Boston, MA: Houghton Mifflin Co.

Wooldridge, J. M. (2006). *Introductory econometrics*. Mason, OH: Thomson South-Western.

Young, D.R. (2000). Alternative models of government-nonprofit sector relations: Theoretical and international perspectives. *Nonprofit and Voluntary Sector Quarterly*, *29*, 149-172. doi:10.1177/0899764000291009

Author Biographies

Deborah A. Carroll is an associate professor in the School of Public Administration at the University of Central Florida and the director of the Center for Public and Nonprofit Management within the College of Health and Public Affairs. Her research focuses on management and policy issues of state and local governments, particularly related to taxation,

revenue diversification, and urban economic development, as well as the interconnectedness of the public and nonprofit sectors and the implications for tax policy, nonprofit management, and public service provision. Her research has appeared in the *Journal of Public Administration Research and Theory*, *Public Administration Review*, *Public Budgeting and Finance, American Review of Public Administration*, and *Urban Affairs Review*, among other academic journals.

Thad D. Calabrese teaches and researches in the field of public and nonprofit financial management. He is especially interested in the areas of employee benefits, the financial implications of collaborative governance and contracting, and capital structure decisions in public service organizations.