Nonprofit Spending and Government Provision of Public Services: Testing Theories of Government-Nonprofit Relationships

Yuan (Daniel) Cheng Indiana University Bloomington

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ABSTRACT

Empirical studies and theories of government-nonprofit relationships have assumed a unidirectional funding flow from governments to nonprofits and therefore focusing on the impact of governments on nonprofits. By bringing in the critical mass theory and utilizing a unique panel dataset that contains nonprofit and city government spending on parks, this article examines several prominent theoretical models of government-nonprofit relationships to answer the question of how expenditures of park-supporting charities influence public spending on parks and recreation services. The findings suggest that nonprofit spending on parks in a city has a non-linear decreasing effect on public spending on parks, which supports the market niche model. In addition, this relationship is mainly driven by local governments' non-capital expenditures on parks. Finally, this article suggests that a two-way understanding is essential for theory building in government-nonprofit relationships.

INTRODUCTION

In the last twenty years, we have witnessed a paradigm shift in public management from the hierarchical authority paradigm of bureaucratic management to collaborative and networked management (Agranoff and McGuire 2001; Salamon 2002; Kettl 2006; O'Toole 1997). Milward and Provan (1993, 222) used the somewhat frightening phrase "hollow state" to signify the changing landscape in public services where "command and control" is no longer the dominant governance mechanism. Contracting out and third-sector service providers are dominant in public service delivery.

Scholars outside the U.S. have also discovered this new public management reality. Rhodes (1996) characterized this new governance era as "governing without government" in the UK. Osborne and Gaebler's (1992) influential book *Reinventing Government* suggested a new model of public management that uses market forces to foster competition in service delivery and thus making the public sector more productive. Cross-sectoral interactions and the value of collaboration are increasingly recognized as not only a *reality* but also a *necessary condition* for addressing some of the society's most challenging problems (McGuire, 2006; Bryson et al., 2006). Smith and Lipsky (2009) used *Nonprofits for Hire* to describe the particular prevalence of nonprofit providers in public services.

Despite the surge of scholarly interest in collaborative management and nonprofit government relationships in the past two decades (Gazley and Guo 2015), the substantive focus of the literature tends to be predominantly focused on social service industries and the contracting regime. Moreover, a unidirectional direction of funding flow from government to nonprofit organizations is assumed. As a result of this assumption, theory building in government-nonprofit relationships is largely biased toward the distinction between provision and production. Nonprofit and for-profit providers are regarded as an alternative arrangement of public service production while public service provision is still assumed to be decided and financed by government agencies (McGinnis 1999). As a result of this single funding flow assumption, the existing literature on government-nonprofit collaboration also tends to focus more on the influence of government funding on nonprofit finances and activities (Gazley and Brudney 2007; Guo 2007; Brooks 2000).

Reversing this assumption, it may be possible for nonprofits to both fund and influence government services. Empirical evidence also supports this academic conjecture. Nelson and Gazley (2014) have documented a rapid growth of school-supporting charities, which are set up to raise money and provide programs for public schools. Gazley, Cheng, and LaFontant (2016) presented a non-linear increase in the rate of creation of public park-supporting charities at the state and federal levels, suggesting that the creation rate is a function of government fiscal stress. Yandle, Noonan, and Gazley (2016) used Ostrom's social-ecological systems (SES) framework

to study philanthropic support for national parks through "friends of parks" charities and cooperating associations. Follman, Cseh, and Brudney (2016) also found a significant growth of volunteer programs that are co-managed by the National Park Service and its nonprofit partners.

This emerging phenomenon of government relying on philanthropy and nonprofits to fund public services has only been partially explored by public management scholars. As governments at all levels suffer from extensive budget cuts and financial crisis, it is a timely policy and management question to ask about the consequences of those nonprofit organizations setting up to mainly fund and support services that are traditionally provided and managed by government agencies. It is also a theoretically interesting question to investigate the possible mechanisms and consequences of nonprofits organizations influencing governments through funding public services, in addition to the mechanism of service delivery and advocacy that are mostly familiar to and recognized by public management scholars (Fyall 2016).

Situated in the context of local parks and recreation services in the 149 largest U.S. cities, this article investigates whether expenditures of park-supporting charities influence the level of public spending on corresponding public services. This article tests three important social science theories – the market niche model, the interdependence model, and the critical mass model –, in their ability to explain these government-nonprofit relationships. This article makes several theoretical and methodological contributions to the literature on government-nonprofit

relationships. First, this article tests the assumption of a unidirectional funding flow from governments to nonprofit organizations ((Lecy and Van Slyke 2013; Grønbjerg and Paarlberg 2001), which implies that government funding would impact the behavior of nonprofit organizations instead of the other way around. This article argues that a two-way understanding is essential for the theory building and development in government-nonprofit relationships. Second, by relaxing the linearity assumption employed by previous studies, this article incorporates the theory of critical mass and builds a nonlinear model to generate a more nuanced understanding of cross-sector government-nonprofit funding interactions. The findings contribute to the existing literature of government-nonprofit relationships and inform current policy and management discussions of alternative ways of financing public services.

CONTEXT AND BACKGROUND

This research takes place within the context of local parks and recreation services in the U.S, focused on the increasing reliance by cities on nonprofit organizations for park financing and management. The policy area of local parks and recreation services provides a particularly rich setting for studying nonprofit government interactions when there is a reverse funding flow from nonprofits to governments. As Ostrom (1990, 26) has pointed out in the analogy between biology and studying complex social processes, “Their (biologists) scientific strategy frequently has involved identifying for empirical observation the simplest possible organism in which a process occurs in a clarified, or even exaggerated, form…The organism is not chosen because it is

representative of all organisms. Rather, the organism is chosen because particular processes can be studied more effectively". Similarly, local parks and recreation services are chosen because the influence of philanthropy on governments in this policy area tends to be exaggerated compared with other policy areas. Parks and recreation services are regarded as a local public good in the sense that they provide multiple social and environmental benefits to the whole community, therefore typically provided and managed by local governments (Walls 2014). However, because of its relatively low priority in local government spending, parks departments are constantly pushed to find partners and alternative funding sources (Skidmore and Scorsone 2011; Kaczynski and Crompton 2006).

On the other hand, nonprofit organizations have become instrumental in financing and managing local parks and recreation services. By studying the 41 most prominent park conservancies in the U.S., Harnik and Martin (2005, 9) found that "on a per acre basis, conservancies spent an average of $14,400, about 50 percent more than public park departments". Those park-supporting charities are also growing very rapidly (Harnik and Martin 2005). In a recent survey of local parks directors by Resources for the Future, Walls (2014) found that among the 44 local park directors who responded to the survey, only five reported that park foundations, friends' organizations or park conservancies generated no money for their park systems. A total of $143 million in private support toward park systems was documented in the survey. In addition, Walls (2014, 12) found that most of those groups spent "their time and money on capital projects and

park programs". Local parks and recreation service are not only a policy area where significant reverse funding flow from nonprofits to governments takes place but the particular processes of nonprofits influencing the provision of public services can also be studied more effectively. As nonprofit organizations become an important source of support for funding local parks and recreation services, it is an important public policy and management question to investigate how expenditures of those nonprofits actually influence the level of public spending of corresponding public agencies.

THEORETICAL PERSPECTIVES

For the interaction between local governments and nonprofit organizations, there are mainly three theoretical frameworks in place that deal with how nonprofit organizations and philanthropy may influence local governments in the provision of public services. I will briefly review the three theoretical frameworks, identify the gaps in the literature, and draw some hypotheses for subsequent modeling and testing.

The Market Niche Model

Smith and Grønbjerg (2006) used the market niche model to characterize a straight market model of government-nonprofit relationships. In this view, nonprofits arise to supply particular types of goods and services to occupying special niches in a mixed economy. In terms of government-nonprofit relationships, theories of contract and government failure offer perhaps the most

articulated understanding of the interaction between governments and nonprofit organizations. Government failure results from the constraints of the democratic system and policy making processes. Governments are not able to meet the demand of heterogeneous citizen preferences beyond the median voter or the dominant political coalition (Buchanan and Tullock 1962). The existence of nonprofits could be the solution to the problem of heterogeneous citizen preferences (high demanders) for collective and public goods (Weisbrod 1975).

Salamon (1987) turned the process around and offered the conceptualization of "voluntary failure." Rather than assuming nonprofits are able to step in when other sectors fail, Salamon recognized the systematic constraints of nonprofits: philanthropic insufficiency, philanthropic particularism, philanthropic paternalism, and philanthropic amateurism. Philanthropic insufficiency refers to the possibility that nonprofits have limited resources due to the existence of the free-rider problem, thus failing to provide adequate collective goods. Philanthropic particularism refers to the tendency of certain nonprofits to focus their programs on specific constituent groups (e.g., certain ethnicities or religions) while leaving other groups unserved. Philanthropic paternalism means that donors of the organization control charitable resources and may determine the goal and activities of the organization. However, the consumers of the service may not be able to make decisions about what services to receive. The final type of voluntary failure, philanthropic amateurism, refers to the human resource constraints of nonprofits:

Nonprofits often rely on volunteers for service provision and their volunteers may lack necessary professional training compared with their government or business counterparts.

From the perspective of the government and voluntary failures theories, the role of nonprofits is to provide those necessary services to meet the heterogeneous demands of local citizens which governments may not be able to provide due to median voter constraints. Governments may also respond to philanthropic insufficiency if nonprofits do not have enough resources to provide corresponding public services. Therefore, based on government failure and voluntary failure theories, when nonprofits are more important in providing the services, governments may reduce their funding in areas of similar services that nonprofits provide, especially when nonprofits primarily depend on private donations to provide the services. Young (2000) characterized this type of government-nonprofit relationship as the supplementary relationship. In this view of nonprofits as a supplement, "private financing of public goods provision can be regarded to have an inverse relationship with government expenditures" (Young 2000, 150). Based on the market niche model, the following hypothesis can be drawn:

Hypothesis 1: Everything else being equal, expenditures of park-supporting charities are negatively associated with the level of local government spending on parks and recreation services.

The Interdependence Model

Rather than competing to provide particular types of services, the interdependence model focuses on the ability of nonprofits to engage in a direct exchange relationship with governments. The basic elements of the interdependence model are articulated by Salamon (1987) to deal with the resource exchange between nonprofits and government agencies to make up each other's weakness. This perspective emphasizes the fact that governments give financial resources and grants to nonprofits for service delivery, which drives the growth of the nonprofit sector (Grønbjerg 1993). At the same time, the existence of nonprofits may also drive the spending of governments in corresponding service areas. Wolpert (1977) raised the idea that in the long run, low demanders, who prefer less public spending on certain public services, may migrate to a community that has a lower provision level of the collective goods, thus driving up the average preference for the collective good in their home community. "At some points, the difference between the preferences of the median voter and the preference of the high demanders may shrink sufficiently that the nonprofit organization's shifts from donative finance to government provision-of-service contracts." (Steinberg 2006, 123) In other words, governments may over time find themselves aligned with the agenda of those nonprofits that have public goals and priorities, thus being willing to delegate the production of those services to nonprofit organizations (Milward and Provan 2000). Young (2000) characterized this model of government-nonprofit relationship as the complementary model.

Empirically, Lecy and Van Slyke (2013) have shown that human service nonprofits tend to have a higher community density when the government provides funding to nonprofits. Compared with the case of government failure, their finding supports the complementary view of the government-nonprofit relationship. By surveying local governments and nonprofits in Georgia, Gazley and Brudney (2007) indicated that in government-nonprofit partnerships, both sides sought multiple goals, with local governments emphasizing more the goal of expertise and capacity while nonprofits are more likely to seek funding from the partnership. Paarlberg and Yoshioka (2016) also found that per capita local government revenues were positively related to the level of community philanthropy, which was measured as per capita giving to local United Way affiliates. There seems to be a pretty robust finding in social and human services that government spending is positively associated with the size of the nonprofit sector. However, this seemingly robust finding is worth being tested in other policy contexts (Lecy and Van Slyke 2013), especially when there is a significant reverse funding flow from nonprofits to governments. Based on the interdependence model, the following hypothesis can be drawn:

Hypothesis 2: Everything else being equal, expenditures of park-supporting charities are positively associated with the level of local government spending on parks and recreation services.

The Critical Mass Model

In addition to the linear and classic understanding of nonprofit government interactions mentioned above, there are some other more nuanced ways of understanding the mechanisms for nonprofit policy influence. Using a grounded theory approach, Fyall (2016) identified several mechanisms by which nonprofits may actually influence public spending: public employees may rely on their nonprofit partners to influence elected officials for more spending in corresponding service areas; nonprofits may serve as funding leverages for state and local governments to receive benefits from other government programs; nonprofits may form advocacy coalitions to increase the effectiveness of their advocacy. The underlying assumption of above mechanisms seems to be that the size of the nonprofits needs to reach a certain threshold to have enough impact.

In classical social science theories, the critical mass theory is used to explain the emergence of successful collective actions: “some threshold of participants or action has to be crossed before a social movement ‘explodes’ into being” (Oliver, Marwell, and Teixeira 1985). In the literature of public management and representative bureaucracy, Meier (1993) suggested a critical mass of Latino teachers was needed to before they can actively represent the interest of a minority group. In the literature of social innovation and social entrepreneurship, the idea of collective impact was raised to illustrate the idea that systematic change will not take place unless all parts of the network work at the same time (Kania and Kramer 2011).

Although not frequently used in the literature of government-nonprofit relationships, a critical mass model may be useful to disentangle the complicated and dynamic relationship between governments and nonprofit organizations. Nonprofit organizations may have to reach a certain size and scale before certain influences on governments take place. Using 253 American symphony orchestras' revenue portfolio information from 1984 to 1991, Brooks (2000, 451) found a nonlinear relationship between government support and charitable giving: "at the low levels of subsidies, government support may stimulate private giving, whereas at high levels it could have just the opposite effect". Young (2000) also suggested that private financing of government services need to be understood both from supplementary and complementary perspectives. Both crowding in and crowding out may work at the same time. However, at different point of the spectrum, their effect may be different. Based on the critical mass model, the following hypothesis can be drawn:

Hypothesis 3: Everything else being equal, expenditures of park-supporting charities have a curvilinear relationship with the level of local government spending on parks and recreation services. In addition, there is a threshold effect of the impact of park-supporting charities' expenditures on the level of local government spending on parks and recreation services.

DATA AND METHODOLOGY

Data Source and Sample

This study draws on several primary data sources that span from government finance, nonprofit finance, to community characteristics. The primary government finance dataset contains information about local public spending on parks and other public finance information for the 149 largest cities in the U.S. in the period from 1989 to 2012[1]. Cities are identified through the Lincoln Institute's Fiscally Standardized Cities (FiSCs) database, which includes more than 120 categories of revenues, expenditures, debt, and assets information, for the 150 largest U.S. cities in the period from 1977 to 2012 period (Lincoln Institute of Land Policy 2016). The major advantage of the FiSCs database is that it provides comparable public finance data for large U.S. cities. The provision and delivery of public services are organized in different ways in different cities. While some cities take the sole responsibilities of providing public services to their residents, others share the responsibilities with other overlapping jurisdictions, such as county governments and special districts. The FiSCs database accounts for those differences by "adding revenues and expenditures of each central city municipal government to a portion of the revenues and expenditures of overlying governments, including counties, independent school districts, and special districts" (Lincoln Institute of Land Policy 2016). By using the FiSCs database, this study is able to both delineate specific government expenditures on parks and recreation services and take different structures of local governments into consideration. Although the 149 largest cities

[1] Washington, D.C. is excluded from the dataset because its jurisdictional level is not compatible with other cities and the public finance structure in Washington, D.C. is quite different from other U.S. cities.

may not be a representative of all the local municipal governments in the U.S., the advantages of precision and comparability that the FiSCs dataset provides outweigh its disadvantage in representativeness. In addition, since park-supporting charities are still a relatively new phenomenon and the need for public greens spaces tends to be more significant in large cities, the focus on the largest cities may give us the freshest and most dynamic examination of this emerging phenomenon.

Information on the finances of park-supporting charities is mainly accessed through and based on the National Center for Charitable Statistics (NCCS) 2013 Core Public Charity Files dataset. NCCS maintains the most comprehensive nonprofit financial data based on their annual returns of form 990. One limitation of the NCCS dataset is that it may miss public charities that do not meet the filing threshold of $50,000 in annual revenues. However, since this study mainly focuses on the "financial" impact of those park-supporting charities and charities that do not file form 990 tend to have a small budget size, the problem is less serious in this case. The NCCS dataset was first filtered to nonprofits that are located only in the 149 largest U.S. cities. Park-supporting charities were then identified in the NCCS database by using both keywords search and National Taxonomy of Exempt Entities (NTEE) codes. NTEE codes are developed by NCCS to characterize the major types of activities those public charities are involved in. However, relying solely on NTEE codes tend to be insufficient to capture all cases, and this is also true in

the case of park-supporting charities[2]. To achieve both efficiency and comprehensiveness, a carefully designed three-step approach was used to identify those park-supporting charities[3]. Each identified park-supporting charities in the 2013 NCCS dataset was then linked to the historical NCCS Core PC File dataset from 1989 to 2012 to construct the complete panel dataset of park-supporting charities in the 149 largest U.S. cities. Expenditures of park-supporting charities were aggregated at the city level to represent cities' total nonprofit expenditures on parks and recreation services in a given year.

Geographic identifiers in the FiSCs dataset and NCCS dataset were used to merge with the 1990 Decennial Census, the 2000 Decennial Census, the 2010 Decennial Census, the 2006-10 American Community Survey (ACS), the Economic Census (1997, 2002, 2007), County-level Social Capital Dataset (1997, 2005, 2009), and the Voting and Elections Collection at the CQ Press (1992, 1996, 2000, 2004, 2008). All the census datasets are accessed through U.S. Census

[2] Through a random test of existing park friends' organizations, the author found that NTEE codes do not provide the most comprehensive coverage of park-supporting charities. For example, Friends of the Garfield Park in Indianapolis is characterized as A (Arts, Culture & Humanities), instead of C (Environment) or N (Recreation & Sports).

[3] First, a different set of keywords search is used to identify potential park-supporting charities under the full NCCS database and under NTEE code C for Environment and NTEE code D for Recreation & Sports. Second, the database is complemented by looking through existing research or reports on city park-supporting charities (Walls, 2014; Harnick & Martin, 2015) to find additional cases of large city park conservancies. Third, a comprehensive examination based on organizations' websites and form 990 was conducted to exclude any organization that does not have a major purpose of supporting local public parks or local public park systems at the city or county level (some land conservancies are supporting private land and some park conservancies are supporting state parks, national parks, or parks in other jurisdictions). Each eligible organization was further coded to identify whether it serves specific city park units or the whole city park system. The resulting search produced 267 city or county park-supporting charities in the largest 149 U.S. cities, excluding Washington, D.C.

Bureau and measured at the county level. Since the Census does not provide yearly information for U.S. counties, existing data points in the dataset were used to linearly interpolate and extrapolate variables to fill in data for missing years. Finally, all variables measured in dollars are transformed to inflation-adjusted 2012 dollars. The final analysis sample includes the largest 149 U.S. cities in the period from 1989 to 2012.

Variables and Measurement

The dependent variable – public spending on parks and recreation services – is measured as two broad categories and six specific forms. In terms of the absolute size of the expenditures, the log of total public direct spending on parks, the log of real public capital outlay spending on parks, and the log of real public non-capital spending on parks are specified as dependent variables. Regarding the proportion of the expenditures, the proportion of the above types of parks and recreation expenditures in their corresponding total government expenditures are specified as dependent variables. According to the Census, total direct expenditures are defined as all expenditures other than intergovernmental expenditures. Capital outlay is the direct expenditures for the construction of buildings, grounds, and other improvements, and the purchase of equipment, land, and existing structures (U.S. Bureau of the Census 2006). Non-capital expenditures are calculated by subtracting capital outlay expenditures from the total direct expenditures on parks and recreation services. The dependent variable is specified as those six forms to capture the differential impact nonprofit spending may have on public spending both in

terms of absolute amount and relative proportion, thus strengthening the robustness of the findings. The absolute size of public spending on parks is specified in logarithmic forms to better fit the normality assumption of the OLS regression[4].

Key independent variables. The key measure for the philanthropic support of parks and recreation service is the lagged total expenditures of park-supporting charities aggregated at the city level by year. Nonprofit expenditures are selected over nonprofit revenues since expenditures are expected to have a more direct impact on park-related projects and government operation. The square of nonprofit expenditures is also included in the model to capture the expected nonlinear relationships between public and nonprofit spending on parks, suggested by the critical mass model. The logarithmic form of nonprofit expenditures is not taken mainly for two reasons. First, there are a lot of zeros in the dataset for nonprofit expenditures, and the logarithmic form will generate a significant amount of missing cases, thus causing bias to the sample. Second, it is quite complicated to interpret the nonlinear impact when both the logarithmic form and its square term are included in the model[5]. Nonprofit expenditures are in units of millions of dollars.

Control variables. Drawing on existing studies of the determinants of local governments' expenditures, three types of control variables are included in the study to control for

[4] Skewness and kurtosis tests have been conducted to justify the log form of government expenditure.

[5] The result does not change much when the log of nonprofit expenditures is included in the model.

community's general demographic characteristics, wealth and economic resources a community has, and the structure of government revenue. All control variables are lagged by one year to account for local governments' budget cycle. Table 1 and Table 2 provide the summary statistics for each of the variables finally included in the panel dataset, including their overall, between, and within variations.

[Insert Table 1 and Table 2 Here]

Empirical Strategy

A fixed effects (FE) model and a lagged dependent variable (LDV) model are estimated here as an identification strategy to investigate the impact of nonprofit expenditures on the public spending on parks and recreation services. They are used in this article for two major reasons. First, the FE model and the LDV model are two powerful panel data models and based on alternative identifying assumptions of the data generating processes, with the FE model assuming time-invariant omitted variables and the LDV model temporal dependence. In the context of this article, they are both valid for different methodological and theoretical reasons. However, there is the risk of a "Nickell bias" in which the combination of lagged dependent variables and fixed effects in the same model can bias the estimates (Nickell 1981; Ling 2012). Therefore, to strengthen the robustness of the findings, it is recommended that applied

researchers use both models to see whether they generate similar results (Angrist and Pischke 2009).

Second, FE and LDV estimates have a nice bracketing property: bounding the causal effect of interest. If the underlying assumption of the LDV model is correct, but the FE model is used, estimates of a positive treatment effect by the FE model will be too large. On the other hand, If the underlying assumption of the FE model is correct, but the LDV model is used, estimates of a positive treatment effect by the LDV model tend to be too small. (Angrist and Pischke 2009, 246). Therefore, by using both the FE and the LDV model, we are likely to have a range of possible causal effect of interest, with the true effect lying somewhere in between.

In the LDV model, the lagged dependent variable is included in the model to capture the persistence of public spending[6]. Theoretically, a city's public spending on public services is expected to be heavily determined by its past levels. Scholars pointed out the LDV model may inflate the overall model fit, decrease the explanatory power of repressors, and cause the coefficients of explanatory variables to be biased downward (Ling 2012; Keele and Kelly 2006). In other words, the LDV model offers a conservative estimate of a possible causal effect, which makes a stronger case for the causal inference if the estimates of key explanatory variables turn to be significant in the LDV model. The LDV model equation can be written as:

[6] The Levin-Lin-Chu unit root test and Harris-Tzavalis unit root test both suggest that the panel is stationary, thus justifying the use of lagged dependent variables in the model.

$$\ln(\text{GOVEXPARKS})_{i,t} = \alpha_0 + \alpha_1 \ln(\text{GOVEXPARKS})_{i,t-1} + \alpha_2(\text{NONPROFIT-SUPPORT})_{i,t-1} + \alpha_3(\text{NONPROFIT-SUPPORT})^2_{i,t-1} + \beta X_{i,t-1} + \varepsilon_{i,t}$$

$\ln(\text{GOVEXPARKS})_{i,t}$ is the natural log of city *i*'s various categories of real local governments' expenditures on parks and recreation in year *t*. $\ln(\text{GOVEXPARKS})_{i,t-1}$ is the natural log of the previous year's real total expenditures in city *i*. $(\text{NONPROFIT-SUPPORT})_{i,t-1}$ is previous year's expenditures of park-supporting charities in city *i*. $(\text{NONPROFIT-SUPPORT})^2_{i,t-1}$ is the quadratic term of the expenditures of park-supporting charities. $X_{i,t-1}$ is a vector of control variables employed in the model. They are lagged for one year to allow for the reaction of the budget cycle. Subscripts *i* and *t* index city and time, respectively.

In the two-way FE model, city fixed effects are included in the model to account for any time-invariant difference between cities in the time frame of the study. In addition to some observable differences that are captured by the model, there may be some fundamental time-invariant differences between cities that may determine the levels of public spending on parks, such as the weather conditions and the nature endowment of the city. City fixed effects are a powerful way of accounting for those differences by giving each city a unique intercept. Year fixed effects are included to capture the influence of aggregate time trends, such as inflation and economic growth, thus reducing the bias to the estimates. By including city fixed effects, year fixed effects,

and a series of control variables, the FE model enables a more consistent and unbiased estimate of the impact of nonprofit funding on public spending *within* a particular city. For the purpose of this article, since the key variable of interest, nonprofit expenditures on parks, varies across years and within cities, the two-way FE model is a powerful way of controlling for cross-unit unobserved heterogeneity (Ling, 2012).

The two-way FE model is specified as the following equation:

$$\ln(\text{GOVEXPARKS})_{i,t} = \alpha_0 + \alpha_1 \ln(\text{GOVEXPARKS})_{i,t-1} + \alpha_2(\text{NONPROFIT-SUPPORT})_{i,t-1} + \alpha_3(\text{NONPROFIT-SUPPORT})^2_{i,t-1} + \beta X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

Compared with the LDV model, the lagged dependent variable is no longer in the FE model. Instead, μ_i and λ_t are included as city-specific and year-specific fixed effects in the model. Other components are identical in the two models. Robust standard errors are used to account for the potential heteroscedasticity of the error term in both models. The results of the analysis for different types of public spending on parks and recreation services are reported in the next section of the article. The estimates of the LDV model and the FE model are listed side by side to facilitate comparison. Both the proportion and the absolute size of public spending on parks and recreation are estimated separately as dependent variables to show the impact of nonprofit expenditures on various aspects of the public spending on parks.

EMPIRICAL FINDINGS AND RESULTS

The multivariate analysis of the total public spending on parks and recreation services is presented in table 3, table 4, and table 5. The market niche model would suggest a negative relationship between nonprofit spending and public spending on parks, while the interdependence model would suggest a positive relationship. The critical mass model would indicate that nonprofit spending is related to public spending on parks in a curvilinear pattern, initially in one certain direction related to public spending on parks but turning to the other direction as nonprofit spending on parks continues to rise. In the empirical model estimation results, the market niche model would be supported when both the coefficients for nonprofit spending and nonprofit spending squared are negative. The interdependence model would be supported when both the coefficients are positive. Finally, the critical mass model would be supported when the coefficients of the first and second order terms of nonprofit spending are in opposite signs. Since the main concern of this article is with the impact of nonprofit spending on public spending rather than the determinants of public funding for parks, the coefficients of control variables will not be interpreted here.

[Insert Table 3 Here]

Table 3 reveals a strong evidence for the critical mass model, thus confirming hypothesis 3. Expenditures of park-supporting charities in a city indeed have a significant impact on the total public spending on parks and recreation services. Moreover, such a relationship is robust and consistent for the total public spending on parks both in terms of the absolute spending size and its relative proportion of local governments' total expenditures. In other words, expenditures of park-supporting charities influence not only how much local governments spend on parks, but also how local governments allocate their funds to parks and recreation services. Such an impact follows a curvilinear relationship both in size and in proportion: public spending on parks first decreases as the expenditures of park-supporting charities increase. However, as nonprofit spending continues to increase and reach a certain threshold, public spending on parks begins to increase as nonprofit spending continues increasing. This result is consistent with the estimates of both the FE and the LDV model, thus proving the robustness of the finding. As expected, the LDV model generates a significantly smaller coefficient than the FE model. This curvilinear relationship is shown in Figure 1.

[Insert Figure 1 Here]

By taking the first derivative of the equation and setting the equation to zero, it is possible to assess at what point expenditures of park-supporting charities begin to have a positive impact on public spending on parks. This threshold point can be termed as the "critical mass" (Meier 1993,

407). The estimated "critical mass" of nonprofit spending is 20.30 to 37.5 million dollars for the absolute size of public spending on parks and 45.29 to 45.79 million dollars for the proportion of public spending on parks[7]. In other words, park-supporting charities in a city need to aggregately spend from 20.30 to 37.5 million dollars before they can bring in instead of reducing public spending on parks. From a substantive perspective, what should we make of this? To check the robustness of the critical mass model, we need to substantively understand how much proportion of the data is below or beyond the turn-around value.

If the smallest number of the "critical mass", 20.30 million dollars, is chosen, only 28 out of 3576 observations (approximately 0.08%) have a nonprofit spending larger or equal to the "critical mass" value. If other "critical mass" values are taken, there are even fewer observations left in the dataset to reach the threshold[8]. For practical purposes, the quadratic to the right of the "critical mass" can be ignored. This suggests that for most cities in the dataset, more expenditures of park-supporting charities lead to less public spending on parks, which actually supports the market niche model. To the left of the "critical mass", increasing one million dollars of nonprofit spending on parks has a decreasing effect on the percentage change in public spending on parks as large as 1.86 percent[9]. If the mean of a city's public spending on parks, 67.5 million dollars, is plugged in, the decreasing effect can be as large as 1.26 million dollars.

[7] The smaller number is estimated by the LDV model and the larger number by the FE model.

[8] Most of those observations are the observations for the New York City in multiple years.

[9] This value is calculated by using the estimate of the FE model of the absolute size of public spending on parks.

This is a strong decreasing effect, although this decreasing effect becomes smaller as nonprofit spending on parks continues to rise.

[Insert Table 4 Here]

By breaking down the public spending on parks to capital and non-capital expenditures, it is possible to detect which expenditure category drives above relationships and whether such relationships are robust across spending categories. From table 4, the relationships for public non-capital spending on parks follow the same pattern as they do for public total spending on parks. There are significant curvilinear relationships between local governments' non-capital spending on parks across model specifications and expenditures of park-supporting charities. From the model fit statistics perspective, the quadratic equation form captures the pattern of public non-capital spending on parks even better than public total spending on parks. Since public non-capital spending on parks is usually considerably larger than capital spending, such evidence may suggest that above curvilinear relationships are mainly driven by nonprofit spending's impact on public non-capital spending on parks. Recent research also suggests that park-supporting charities are mainly engaged in operational-level works such as volunteer management, natural resource conservation, and offering recreation programs (Gazley et al. 2016). The estimated "critical mass" is 38.68 to 52.22 million dollars for the absolute size of public non-capital spending on parks and 57.09 to 78.07 million dollars for the proportion of

public non-capital spending on parks. Consistent with the pattern of public total spending on parks, few observations in the dataset reach the threshold of the "critical mass", thus supporting the market model.

[Insert Table 5 Here]

According to table 5, there seems to be an absence of relationships between nonprofit spending and public capital spending on parks. Only the LDV model of the percentage public capital spending on parks follows the similar patterns and turns to be statistically significant for the linear and quadratic terms of nonprofit expenditures. The other three models all suggest that there are positive relationships between nonprofit expenditures and public capital spending on parks, although the relationships are not statistically significant. However, joint F-tests for the parameters of the linear and quadratic terms of nonprofit expenditures are statistically significant at an alpha level of 0.05 across four model specifications, which suggests a statistically significant relationship between nonprofit expenditures and public capital spending on parks. However, the exact pattern of how nonprofit expenditures influence public capital spending on parks is not clear. From a substantive perspective, capital spending is generally more difficult to predict compared with operational spending. A local government's decision to finance capital projects in parks may be determined by certain events or opportunities that are not captured in this estimated model, such as certain intergovernmental grant opportunities. In addition, a city

does not need capital projects in parks as regularly as operational projects. This proposition is supported by the fact that models with public capital spending as the dependent variable have a consistently lower R-square or Rho compared with corresponding models for other spending categories.

Finally, the value of the critical mass model deserves some further discussions. Although only a few cities are able to reach the "critical mass" in this study, thus generally supporting the market niche model, the critical mass theory seems to be a promising way of understanding government-nonprofit relationships. On the one hand, the strong evidence of a non-linear decreasing effect of nonprofit spending suggests that public nonprofit funding relationships do flattern out when nonprofit spending on parks continue to rise. In addition, even for cities that do reach the "critical mass" of nonprofit spending on parks such as New York, their inter-sectoral funding relationships tend to differ based on the stage and magnitude of such funding exchanges. Figure 2 presents the trend of public and nonprofit spending on parks in New York. From the graph, we can see that from 1989 to 1995, public and nonprofit spending on parks change in opposite directions. However, from 1995 forward, public and nonprofit funding on parks both grow in similar patterns. This general pattern of public nonprofit relationships fit the critical mass models well. Such evidence suggests that the critical mass theory does help us understand such complex relationships better.

[Insert Figure 2 Here]

COCLUNSION

This study seeks to understand how the spending of charitable nonprofits created specifically to support city parks influences the city's own of corresponding public services, especially when there is a significant funding flow from nonprofits to governments. Drawing on a unique panel dataset that contains the data of both nonprofit and major U.S. city public spending on parks and recreation services, this article uses multiple panel data analysis models to empirically test several prominent theories of government-nonprofit relationships. The findings suggest that expenditures of park-supporting charities in a city has a non-linear decreasing effect on public spending on parks, which supports the market niche model. In addition, the above relationship is mainly driven by local governments' non-capital expenditures on parks. Although the critical mass model is not generally supported by the current data, the strong evidence of the quadratic relationship and the existence of few cities that do reach the "critical mass" threshold suggest that the critical mass theory and non-linear models are promising ways of disentangling complex relationships between nonprofits and governments. Finally, this article supports scholars' concerns that government-nonprofit relationships may not be identical when subsectors rely on government funds in different ways (Grønbjerg and Paarlberg 2001; Lecy and Van Slyke 2013). The interdependence model, which is found by multiple empirical studies in the nonprofit human services sector, is not supported by the findings of this study. This result suggests that the

direction of funding flow seems to be a key concern in shaping government-nonprofit relationships.

One limitation of this study is the presence of simultaneous causality between nonprofit and government expenditures. Although the two-way fixed effects model and lagged dependent variables model are very powerful in terms of removing time-invariant confounding variables and taking temporal dynamics into consideration, this study cannot eliminate the simultaneity bias entailed in cross-sectoral interactions. However, this study does serve as the first step of understanding how nonprofits may influence governments and public service provision and the findings are robust across different model specifications. This research carries great potential for cross-national and cross-policy-area comparative applications. In addition, because of the structure of the IRS 990 data, this study cannot distinguish between nonprofit expenditures that are based on private contributions and government grants & contracts. However, since nonprofits operated in the field of parks and recreation are mainly donative charities[10], the inability of distinguishing different sources of nonprofit revenues may not be as big a problem compared with other nonprofit sectors in which they heavily rely on government grants and contracts to provide services. Finally, limiting the analysis to the largest U.S. cities leaves out the possibility

[10] By merging the data with the NCCS-GuideStar National Nonprofit Research Database (the "Digitized Data") which separates private contributions and government grants, the government grant ratio for these park-supporting charities is 7.18%, and program service ratio 14.9%. Those are considerably lower than the numbers of the general nonprofit sector. However, since the "Digitized Data" only contains public charities that filed form 990 from 1998 to 2003, this database is not used for the scope of in this study.

of testing different results for less populous and resourced communities, but these contexts are worthy of exploration.

The conscientious selection of parks and recreation services is based on the rationale that the processes of how nonprofits would influence public service provision can be studied more effectively in a situation where there is a significant funding flow from nonprofits to governments. The contrast of findings between this study and previous empirical studies suggest that the direction of funding flow and the way we model government-nonprofit relationships do matter. The mechanisms for how governments influence nonprofits may be fundamentally different from the mechanisms for how nonprofits influence governments. A two-way understanding is essential for the theory building and development in government-nonprofit relationships. The next step is to apply the findings and theoretical insights gained from this study to different geographical and policy contexts.

In addition, more in-depth qualitative research needs to be done to understand the causal mechanisms of why certain models work better at different stages of the relationship. New York stands out in the analysis as the case Field research and case studies could be done in New York or other places to examine why park-supporting charities could collectively have such an impact, what the network structure is for park-supporting charities in a city, what strategies nonprofits are using to influence the levels of public expenditures, and the distributional and performance

implications of cross-sectoral interaction and collaboration, Those questions are not only important for parks and recreation services, but also for the better understanding of government-nonprofit relationships and cross-sectoral interactions. This is a very promising line of research and contributes to the larger theory of whether and how nonprofits influence government.

Fundamentally, this research suggests that nonprofits can indeed have an impact on public service provision. Broadening the research scope from the one-way impact of government funding on nonprofits to a two-way interaction is essential for further theoretical developments and a more nuanced understanding of government-nonprofit relationships. In this new context where nonprofits support and fund government services, new theories of government-nonprofit relationships may be required. This study starts this endeavor by bringing in one of the prominent models in collective action theories, the critical mass model. The findings of this study suggest the possibility that governments may free-ride when nonprofits step in to fund and support public services. New theories in government-nonprofit relationships are needed to understand how nonprofits in certain subsectors and geographical contexts manage to overcome such collective action problems. The policy and management implications of studying such phenomenon tend to be also huge when governments at all levels and around the world are suffering from extensive budget cuts and financial losses.

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Figure 1: Non-linear Relationships between Nonprofit and Public Spending on Parks

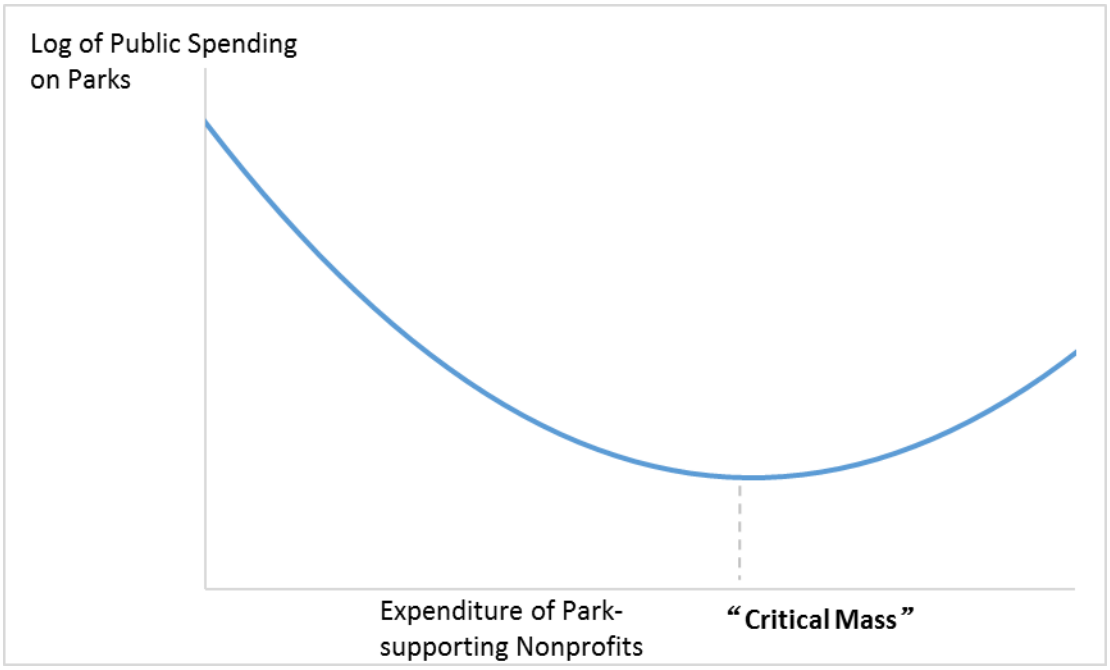

Table 1: Descriptive Statistics of the Dependent Variables

Park Expenditure Categories		Mean	SD	Min.	Max.	Observations	
Log of total direct expenditures	overall	17.253	1.269	11.708	21.040	N =	3576
	between		1.214	13.870	20.608	n =	149
	within		0.380	13.295	19.508	T =	24
Log of non-capital expenditures	overall	16.976	1.188	11.677	20.484	N =	3576
	between		1.150	13.626	20.255	n =	149
	within		0.312	13.284	18.868	T =	24
Log of capital expenditures	overall	14.787	3.451	0	20.251	N =	3457
	between		2.628	2.439	19.311	n =	149
	within		2.246	-0.469	26.238	T =	24
Percentage total direct expenditures	overall	3.627	2.203	0.014	-0.950	N =	3576
	between		1.685	0.893	8.856	n =	149
	within		1.426	-1.283	33.429	T =	24
Percentage non-capital expenditures	overall	3.138	1.647	.015	12.812	N =	3576
	between		1.466	0.697	7.619	n =	149
	within		0.760	-1.309	10.806	T =	24
Percentage capital expenditures	overall	6.156	7.182	0	73.815	N =	3457
	between		3.593	0.047	17.565	n =	149
	within		6.226	-10.439	70.259	T =	24

Note: All the above categories are for parks and recreation services

Table 2: Descriptive Statistics of the Independent and Control Variables

Variable		Mean	SD	Min.	Max.	Observations	
Total nonprofit expenditures	overall	0.942	5.607	0	101.191	N =	3576
	between		5.016	0	59.5112	n =	149
	within		2.538	-39.520	42.622	T =	24
Log of median household income	overall	10.922	0.181	10.403	11.537	N =	3576
	between		0.177	10.510	11.450	n =	149
	within		0.040	10.742	11.037	T =	24
Log of median housing value	overall	12.059	0.467	11.177	14.103	N =	3576
	between		0.436	11.319	13.827	n =	149
	within		0.170	11.292	12.616	T =	24
Percentage homeownership	overall	61.527	7.793	17.680	79.600	N =	3576
	between		7.630	20.478	77.866	n =	149
	within		1.700	50.722	67.289	T =	24
Percentage population in poverty	overall	12.871	4.150	4.478	30.520	N =	3576
	between		4.044	4.590	25.367	n =	149
	within		0.986	5.688	18.536	T =	24
Median age	overall	34.168	2.870	22.420	46.960	N =	3576
	between		2.526	23.503	43.825	n =	149
	within		1.377	28.318	39.798	T =	24
Percentage white	overall	73.429	14.515	26.622	99.299	N =	3576
	between		14.061	31.473	98.074	n =	149
	within		3.778	62.214	91.662	T =	24
Percentage bachelor's degree or higher	overall	26.952	7.366	10.130	59.360	N =	3576
	between		6.888	12.605	50.118	n =	149
	within		2.667	16.720	36.195	T =	24
Percentage voted for the Democratic candidate	overall	49.873	13.774	0	89.300	N =	3576
	between		11.978	0	81.729	n =	149
	within		6.872	26.827	76.183	T =	24
Percentage intergovernmental revenue	overall	37.531	10.597	12.790	71.499	N =	3576
	between		9.729	16.643	64.392	n =	149
	within		4.273	13.929	55.942	T =	24
Percentage property tax revenue	overall	26.055	10.173	6.675	72.064	N =	3576
	between		9.383	8.897	66.780	n =	149
	within		4.003	5.902	50.914	T =	24
City Population	overall	4.071	7.577	0.163	82.731	N =	3576
	between		7.585	0.173	78.237	n =	149
	within		0.494	-0.809	8.565	T =	24

Table 3: FE and LDV Models of Local Governments' Total Expenditures on Parks

	DV: Log of Total Expenditures		DV: Percentage Total Expenditures	
	FE	**LDV**	**FE**	**LDV**
Lagged DV		0.897***		0.717***
		(0.0102)		(0.0571)
Nonprofit expenditures	-0.0186***	-0.00300	-0.0470***	-0.0298**
	(0.00575)	(0.00321)	(0.0179)	(0.0119)
Nonprofit expenditures squared	0.000248***	0.0000739**	0.000514***	0.000329***
	(0.0000557)	(0.0000290)	(0.000156)	(0.000107)
Log of median household income	0.968	0.0186	-1.771	-1.726***
	(0.843)	(0.0941)	(2.395)	(0.440)
Log of median housing value	0.324	-0.00753	0.934*	0.260***
	(0.197)	(0.0235)	(0.546)	(0.0967)
Percentage homeownership	0.00286	-0.00189	0.0700	0.00520
	(0.0170)	(0.00122)	(0.0545)	(0.00458)
Percentage in poverty	-0.0392*	-0.00504	-0.134*	-0.0638***
	(0.0222)	(0.00346)	(0.0705)	(0.0163)
Median age	-0.0394	-0.00368	-0.0668	-0.0321***
	(0.0291)	(0.00281)	(0.0906)	(0.0121)
Percentage white	0.00763	-0.000657	0.0273	0.00125
	(0.00768)	(0.000645)	(0.0267)	(0.00241)
Percentage bachelor's degree or higher	-0.0347**	0.00118	-0.0821*	0.0137***
	(0.0151)	(0.00110)	(0.0494)	(0.00498)
Percentage voted for the Democratic candidate	0.00136	0.000665	0.000496	-0.00124
	(0.00456)	(0.000639)	(0.0139)	(0.00239)
Percentage intergovernmental revenue	-0.00502	-0.00328***	-0.0129	-0.0152***
	(0.00339)	(0.000786)	(0.0139)	(0.00357)
Percentage property tax revenue	-0.0107**	-0.00380***	-0.0281	-0.0119***
	(0.00430)	(0.000790)	(0.0201)	(0.00365)
Population	0.166***	0.0253***	0.150	0.0264***
	(0.0357)	(0.00304)	(0.128)	(0.00996)
Population squared	-0.000298**	-0.000707***	0.000302*	-0.000175
	(0.000148)	(0.000140)	(0.000167)	(0.000149)
Constant	4.338	2.106**	11.97	18.75***
	(8.492)	(0.938)	(25.50)	(4.459)
Observations	3427	3427	3427	3427
Rho	0.888		0.637	
R^2		0.933		0.590

Note: DV = dependent variable. Robust standard errors are in the parentheses. Year and city dummies are not reported. Significance Level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: FE and LDV Models of Local Governments' Non-Capital Expenditures on Parks

	DV: Log of Non-Capital Expenditures		DV: Percentage Non-Capital Expenditures	
	FE	**LDV**	**FE**	**LDV**
Lagged DV		0.946***		0.914***
		(0.00994)		(0.0136)
Nonprofit expenditures	-0.0235***	-0.00485**	-0.0534***	-0.0145***
	(0.00582)	(0.00206)	(0.0165)	(0.00488)
Nonprofit expenditures squared	0.000225***	0.0000627***	0.000342**	0.000127***
	(0.0000513)	(0.0000195)	(0.000133)	(0.0000414)
Log of median household income	1.666*	-0.0129	1.784	-0.655***
	(0.850)	(0.0647)	(2.165)	(0.183)
Log of median housing value	0.246	-0.000781	0.406	0.103**
	(0.196)	(0.0159)	(0.410)	(0.0408)
Percentage homeownership	0.00126	-0.000889	0.0302	0.00278
	(0.0133)	(0.000728)	(0.0317)	(0.00207)
Percentage in poverty	-0.0118	-0.00345	-0.0382	-0.0200***
	(0.0252)	(0.00234)	(0.0691)	(0.00697)
Median age	-0.0285	-0.00252	-0.0553	-0.0106**
	(0.0325)	(0.00187)	(0.0859)	(0.00505)
Percentage white	0.0108	-0.000340	0.0458**	0.000722
	(0.00725)	(0.000434)	(0.0213)	(0.00123)
Percentage bachelor's degree or higher	-0.0236	0.000782	-0.0220	0.00552***
	(0.0155)	(0.000812)	(0.0424)	(0.00206)
Percentage voted for the Democratic candidate	0.00222	0.000173	0.00790	-0.000244
	(0.00421)	(0.000428)	(0.0112)	(0.00117)
Percentage intergovernmental revenue	-0.00277	-0.00201***	-0.00119	-0.00432***
	(0.00290)	(0.000539)	(0.00895)	(0.00145)
Percentage property tax revenue	-0.00435	-0.00223***	0.00485	-0.00380***
	(0.00318)	(0.000540)	(0.00867)	(0.00135)
Population	0.123***	0.0123***	-0.0854	0.00380
	(0.0411)	(0.00231)	(0.108)	(0.00284)
Population squared	-0.00102***	-0.000132***	0.000996	-0.0000170
	(0.000368)	(0.0000305)	(0.000834)	(0.0000452)
Constant	-3.910	1.354**	-23.97	6.681***
	(9.243)	(0.626)	(23.43)	(1.895)
Observations	3427	3427	3427	3427
Rho	0.930		0.848	
R^2		0.966		0.869

Note: DV = dependent variable. Robust standard errors are in the parentheses. Year and city dummies are not reported. Significance Level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: FE and LDV Models of Local Governments' Capital Expenditures on Parks

	DV: Log of Capital Expenditures		DV: Percentage Capital Expenditures	
	FE	**LDV**	**FE**	**LDV**
Lagged DV		0.632***		0.525***
		(0.0316)		(0.0301)
Nonprofit expenditures	0.0303	0.0242	0.00924	-0.0850*
	(0.0322)	(0.0148)	(0.0742)	(0.0492)
Nonprofit expenditures squared	0.000154	0.0000899	0.00106	0.00120***
	(0.000249)	(0.000122)	(0.000668)	(0.000409)
Log of median household income	-6.909*	-0.301	-18.37**	-3.710**
	(3.844)	(0.648)	(8.961)	(1.703)
Log of median housing value	1.718**	-0.0465	4.489*	-0.0429
	(0.861)	(0.173)	(2.311)	(0.438)
Percentage homeownership	0.0150	-0.00133	0.246	-0.0222
	(0.0681)	(0.00850)	(0.230)	(0.0214)
Percentage in poverty	-0.261**	-0.0408	-0.555**	-0.228***
	(0.121)	(0.0259)	(0.272)	(0.0643)
Median age	-0.310**	-0.0517***	-0.282	-0.0893
	(0.135)	(0.0197)	(0.312)	(0.0574)
Percentage white	0.0474	-0.00476	0.0101	-0.0107
	(0.0379)	(0.00516)	(0.103)	(0.0117)
Percentage bachelor's degree or higher	0.00459	0.00954	-0.227	0.0204
	(0.0710)	(0.00822)	(0.187)	(0.0197)
Percentage voted for the Democratic candidate	-0.0323	0.000193	-0.0288	0.000505
	(0.0269)	(0.00487)	(0.0612)	(0.0110)
Percentage intergovernmental revenue	-0.000376	-0.0260***	-0.0392	-0.0257**
	(0.0216)	(0.00515)	(0.0589)	(0.0124)
Percentage property tax revenue	0.0243	-0.0389***	-0.125	-0.0227*
	(0.0244)	(0.00708)	(0.0790)	(0.0126)
Population	0.556*	0.154***	0.897*	0.144***
	(0.293)	(0.0147)	(0.490)	(0.0365)
Population squared	-0.00573**	-0.00199***	-0.00888**	-0.00201***
	(0.00238)	(0.000211)	(0.00427)	(0.000558)
Constant	77.39*	13.22**	162.6*	52.67***
	(43.21)	(6.549)	(84.26)	(16.65)
Observations	3427	3427	3427	3427
Rho	0.593		0.370	
R^2		0.555		0.308

Note: DV = dependent variable. Robust standard errors are in the parentheses. Year and city dummies are not reported. Significance Level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 2: Public and Nonprofit Spending on Parks in New York