UNDERSTANDING GOVERNMENT-SUPPORTING NONPROFITS AND THEIR RELATIONSHIPS WITH GOVERNMENTS:
EVIDENCE FROM LOCAL PARKS AND RECREATION SERVICES

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This dissertation examines the process and consequences of nonprofits becoming important players in determining and supporting government service provision, in the context of parks and recreation services in large U.S. cities. By conducting a content analysis of 204 park-supporting nonprofits’ websites, the first paper empirically investigates under what circumstances nonprofits are more likely to be involved in the planning and design of public services. Built on a unique panel dataset that contains nonprofit and city government spending on parks, the second paper answers the question of how expenditures of park-supporting charities influence public spending on parks and recreation services. Built on interviews with local government and nonprofit executives in public-nonprofit partnerships for parks, the third paper investigates why different forms of government-nonprofit partnerships emerge and how they are governed in different ways. This dissertation contributes to scholarship on government-nonprofit relationships, public service provision, and governance by presentation new theories and evidence of nonprofit support for public services.

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INTRODUCTION

This dissertation examines the process and consequences of nonprofits becoming important players in determining and supporting public service provision, in the context of parks and recreation services in large U.S. cities. It contributes to the theory and practices of public and nonprofit management in two major aspects. From a public policy and public management perspective, local governments are facing ongoing fiscal stress and therefore actively seeking to form partnerships with nongovernmental entities. However, such practices present new challenges for public and nonprofit managers, and pose challenges to the capacity of local governments. This dissertation offers a thorough and timely examination of the antecedence, processes, and consequences of these public-nonprofit partnerships.

From a theoretical perspective, existing literature of government-nonprofit relationships, cross-sectoral collaboration, and coproduction rarely talk to each other and they all focus on the role of nonprofits as a producer or co-producer of public services. Existing research in this area therefore focuses on the impact of public funding on the behaviors of nonprofit organizations. The role of nonprofits in financing, creating, and planning public services is largely overlooked. By focusing on local parks and recreation services in large U.S. cities, this dissertation builds a unique longitudinal dataset and uses multiple methods to examine the relationships between governments and nonprofits when there is a reverse funding flow from nonprofits to governments. It not only offers new empirical evidence for a new public service sub-sector, but
also contributes to the theory development of government-nonprofit relationships in terms of how nonprofits may influence government and how these relationships are governed.

More specifically, I examine the role of nonprofit organizations in determining and supporting public service provision from three distinctive yet interconnected angles. In the first chapter of the dissertation, *Understanding Nonprofit Support for Public Services: Moving from Co-production to Co-governance*, I investigate whether nonprofits’ involvement in public service planning and design, or co-governance, is a distinct type of nonprofit support for public services, and under what circumstances nonprofits are more likely to be involved in the planning and design of public services. The findings suggest co-governance, although not as prevalent, is indeed a distinct type of nonprofit support for public services. Nonprofits are more likely to get involved in co-governance when they are larger and younger, and operate in communities which are resourceful, stable, socially diverse, and have weak government capacity in providing corresponding public services.

In the second chapter, *Nonprofit Spending and Government Provision of Public Services: Testing Theories of Government-Nonprofit Relationships*, I examine 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. I bring in the critical mass theory, construct a unique panel dataset that contains nonprofit and city government spending on parks, and use multiple panel data analysis models to answer this question. 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. This chapter suggests that government-nonprofit relationships are not identical when the direction of funding flow differs in subsectors. The critical mass theory and non-linear models are promising ways of disentangling complex relationships between nonprofits and governments.

In Chapter 3, *Governing Public-Nonprofit Partnerships: Linking Governance Mechanisms to Collaboration Stages*, I investigate how these public-nonprofit partnerships are governed and how these governance mechanisms are linked to the different stages of the collaboration continuum. To answer this question, I use a grounded-theory-based comparative case study approach and conduct interviews with the leaders of public-nonprofit partnerships for city parks in major cities of the Ohio River Basin Region. Four governance mechanisms are developed in this chapter: government representation on the nonprofit board, reaching a formal agreement, building relationships, and building leadership capacity. These governance mechanisms are also likely to play different roles in different stages of the collaboration continuum.

In conclusion, this dissertation uses multiple methods to examine the determinants, consequences, and governance mechanisms of public-nonprofit partnerships for the provision of parks and recreation services in large U.S. cities. Chapter 1, 2, and 3 provides detailed examinations of the above issues in the form of three research papers. In the conclusion of the dissertation, I summarize the overall findings and discuss the implications of this dissertation for future research. This dissertation advances our understanding of a new area of nonprofit and public management research, built at the intersection of nonprofit management, coproduction,
collaborative public management, and environmental governance. It is especially relevant when
governments at different levels are suffering from fiscal stress and relying more on public-
private partnerships for public service provision.
CHAPTER 1

UNDERSTANDING NONPROFIT SUPPORT FOR PUBLIC SERVICES:

MOVING FROM CO-PRODUCTION TO CO-GOVERNANCE

Abstract:

Informed by the literature of co-production, this paper develops a theoretical framework for nonprofits’ involvement in the planning of public services or co-governance, and empirically tests it by utilizing a unique dataset of park-supporting nonprofits in large U.S. cities. The findings of exploratory factor analysis suggest that co-governance, although not as prevalent, is indeed a distinct type of nonprofit support for public services. The multilevel logistic regression analysis suggests that nonprofits are more likely to get involved in co-governance when they are larger and younger, and operate in communities which are resourceful, stable, socially diverse, and has weak government capacity in providing corresponding public services. The proportion of donative income is not a determinant of nonprofit involvement in co-governance.
Introduction

Exemplified by administrative reforms in New Zealand and later in Western Europe and in the USA in the 1980s and 1990s, New Public Management (NPM) began to take shape. Public management borrowed the management practices from the private sector and contracting becomes a widespread practice of American governments at different levels (Salamon 2002; Kettl 2002). Government agencies are increasingly using indirect management tools and network arrangement to deliver public services (Kettl, 2002; Salamon, 2002; O’Toole, 1997). Nonprofit organizations, or the third sector in general, receive increasing attention from public management research because of their prominent role in the provision and production of public services (Smith & Lipsky, 1993; Brandsen & Pestoff, 2006).

Despite this surge of academic interest in government-nonprofit collaboration in public service provision (Gazley & Guo, 2015), existing literature focuses on the instrumental orientations of nonprofits’ involvement in the delivery of public services. The key question is how nonprofits can serve as a more efficient alternative in producing public services, compared with governments delivering these services on their own? Nonprofits are still largely excluded from the creation, design, and planning of public services. Although this conceptual distinction between provision and production provides analytical clarity in discussing the role of nonprofit organizations in public services, the boundary between nonprofits’ involvement in public service provision and production seems to be not as clear. This limitation is amplified when governments at all levels experience fiscal stress and increasingly rely on nonprofit organizations for funding public services (Nelson & Gazley, 2014; Gazley, Cheng, & LaFontant, 2015). Scholars are actively seeking ways to obtain a complete understanding of nonprofit support for
public services, both regarding their service production and provision functions (Fyall, 2016; Mosley, 2012; Brandsen & Pestoff, 2006).

Literature in governance offers a promising alternative in understanding the role of nonprofit organizations in public services. Governance concerns with about how different sectors interact with each other and engage in joint decision making (Klijn, 2012). It emphasizes the facilitation role and cross-boundary management challenges of conductive public organizations (Agranoff, 2012). Denhardt and Denhardt (2000, 2015) developed the idea of new public service to characterize the new feature of modern government: serving rather than steering. The proper role of the government is not to decide what citizens need to have. Its role is to serve the citizens to help them reach their goals through various mechanisms. In this new framework of governance, the key question is how governments and nonprofits could go beyond coproducive relationships and jointly plan and design public services. Brandsen and Pestoff (2006) characterized this type of arrangement in which nonprofits participate in the planning of public services as co-governance.

Informed by the literature of co-production, this paper develops a theoretical framework for nonprofits’ involvement in the planning and design, or the co-governance of public services. Situated in the context of 204 park-supporting nonprofits in large U.S. cities, this paper answers two main research questions: 1) Is nonprofits’ involvement in public service planning and design, or co-governance, a distinct form of nonprofit support for public services? 2) What are the key
contextual and organizational factors that determine whether a nonprofit gets involved in the planning and design of public services?

This paper makes several theoretical and empirical contributions to the literature of government-nonprofit relationships, public service management, and coproduction. First, by focusing on local parks and recreation services in which nonprofits are documented to play a significant role in funding and supporting public services, this study provides one of the first empirical studies so far that focus on the role of nonprofit organizations in service planning and design. Earlier studies pointed out that such a role of nonprofit organizations tends to be missing or underdeveloped (Tsukamoto & Nishimura, 2006; Osborne & McLaughlin, 2004). There is therefore little empirical evidence or very few actual cases that directly deal with the role of nonprofits in public service planning and design.

Second, this empirical research builds on existing typologies of coproduction and provides a timely contribution to our understanding of the variations of coproduction, especially at the collective level. By using factor analysis and content analysis of these park-supporting nonprofits’ websites, this study offers a broad range of public service supporting activities of these nonprofits and the patterns of such activities. It also provides the empirical tests of whether the distinction between co-governance and co-production is valid in characterizing government-nonprofit cooperation in public service provision.
Finally, this paper offers a comprehensive theoretical framework that takes both organizational and community level characteristics into consideration. Multilevel logistic regression analysis is also the suitable analytical tool in testing the framework and disentangling the nested data structure (park-supporting nonprofits are nested in cities) of the model. By including local governments’ capacity of providing public services in the theoretical model, this paper offers a more nuanced understanding of government-nonprofit relationships and how these relationships may influence nonprofits’ involvement in different phases of public service provision.

The next section presents co-governance, nonprofits’ participation in public service design and planning, as a distinct form of nonprofit support for public services. A theoretical framework is then presented to understand under what conditions nonprofits are more likely to engage in public service design and planning activities. Several hypotheses are developed from this framework. The paper then briefly describes the context of this study and empirically tests these hypotheses using a unique dataset that contains information about the finances of park-supporting nonprofits, community characteristics, and government spending on parks and recreation services. The paper concludes by discussing the implications of the findings for public service provision and theory building in government-nonprofit relationships.

Co-governance as a Distinct Type of Nonprofit Support for Public Services

Within the political science and public administration literature, coproduction is an important theoretical framework for understanding citizens’ involvement in public service provision. According to the theory of coproduction, citizens’ involvement in public service delivery can
possibly improve the cost-effectiveness and quality of public services. This concept can be traced back to the Ostroms in the 1970s when they studied metropolitan governance and the nature of public economies (Aligica & Boettke, 2009). The Ostroms used coproduction to reflect the fact that the value of public services cannot be fully captured without an informed and active involvement of service users (1977). Parks et al. further elaborated the concept as “a mixing of the productive efforts of regular and consumer producers” (1981, p. 1002).

From the origin of this idea, scholars have pointed out the possibility for both individual citizens and groups (a distinction is occasionally made between informal groups or formal organizations) to get involved in this type of joint production of public services. Parks et al. (1981) used a group effort of parents and students in improving education services to illustrate the concept of coproduction. Brudney and England (1983) pointed out the importance of collective forms of coproduction and further developed three types of coproduction under the umbrella term “coproduction”: individual coproduction, group coproduction, and collective coproduction. In a recent review of coproduction typologies, Nabatchi, Sancino, and Sicilia (2017) used the example of local parks departments working with citizens to support parks and recreation services as a typical form of collective coproduction, which provides social benefits to the whole community. Informal local volunteer groups or formal friends’ organizations of the parks often play an instrumental role in facilitating and organizing citizens’ involvement in such services.

Although there may be potential risks of overlooking incidental inputs by citizens by focusing on institutionalized types of coproduction (Brandsen & Honingh, 2015), the benefits are equally
appealing. Coproduction is not resource-free (Bovaird & Loeffler, 2012) and it may be better coordinated by formal organizations, such as neighborhood associations or charitable nonprofit organizations (Paarlberg & Gen, 2009). Therefore, by studying organizational level coproduction, we may have a better understanding of how such efforts are organized and sustained. Recently, as governments at all level suffer from ongoing fiscal stress and nonprofits taking important roles in public service provision, there is a surge of academic interest in the role of the third sector in public service provision (Brandsen & Pestoff, 2006).

The original conceptualization of coproduction mainly treated coproduction as an alternative mechanism for public service delivery. However, scholars soon found that this is not enough to cover the vast array of activities citizens are involved in public service provision. Coproduction thus became an umbrella term to describe all sorts of citizen support and engagement in public services (Nabatchi, Sancino, & Sicilia, 2017; Verschuere, Brandsen, & Pestoff, 2012). Despite some efforts in separating coproduction from co-provision (Ferris, 1984), co-creation (Voorberg, Bekkers, & Tummers, 2014), co-management (Brandsen & Pestoff, 2006), and co-governance (Osborne & McLaughlin, 2004), those terms are generally used interchangeably in the literature (Osborne & Strokosch, 2013).

For the purpose of this paper, I will not dive into the definition of coproduction. Instead, the discussion will be developed based on the consensus of current literature on coproduction. Scholars have recognized that the phases of public policy or public service cycle serve as a significant role in characterizing different types of coproduction, both at the individual and
organizational level. Nabatchi, Sancino, and Sicilia (2017) developed a typology of coproduction based on “the use of coproduction during the phases of the service cycle” (p.6). Co-commissioning and co-designing focus on the planning and designing phases of public services, while co-delivery and co-assessment focus on the implementation and evaluation of these services. Brandsen & Pestoff (2006) developed a typology of co-production by distinguishing between public service planning (co-governance) and public service production (co-management and co-production). Based on the degree of citizen involvement in public services, Voorberg et al. (2014) developed three roles citizens may play in public service provision: citizen as a co-implementer, citizen as a co-designer, and citizen as an initiator. Based on such distinctions, they further pointed out that it may be better to distinguish between co-creation and co-production. Co-creation is achieved when citizens serve as the co-initiator or co-designer of public services. Co-production instead mainly focuses on citizens’ involvement in the actual delivery or implementation of public service. Following such a distinction between coproduction and co-governance/co-creation, I separate co-governance as a distinct form of nonprofit support for public services and ask the question of under what conditions a nonprofit gets involved in the planning and design of public services. Although co-creation and co-governance can be used interchangeably in the context of this study, I use co-governance mainly because it is a concept developed more centered on nonprofit organizations while co-creation focuses more on citizen level involvement in public services.

**Determinants of Nonprofits’ Involvement in the Co-governance of Public Services**

Prior literature has identified a variety of community and organizational factors that may influence nonprofits’ involvement in public service delivery and provision. I propose four
community capacity related factors and three organizational capacity related factors that may influence nonprofits’ participation in public service planning and design. Figure 1-1 is presented to summarize the theoretical framework and corresponding hypotheses.

**Figure 1-1: Theoretical Model for Nonprofits’ involvement in Co-Governance**

![Diagram](image)

**Community Capacity**
- Community Human and Financial Resources (H1+)
- Community Stability (H2+)
- Social Diversity (H3+)
- Government Capacity (H4-)

**Organizational Capacity**
- Organizational Size (H5+)
- Organizational Age (H6+)
- Proportion Donative Revenue (H7+)

**Community’s Financial and Human Resources**

Community’s financial and human resources play a substantial role in mobilizing and supporting collective activities. Since the task of public service design and planning requires professional knowledge and particular expertise in that public service subsector, human capital and collective skills play a critical role in enabling the community to engage in such activities. In addition, communities with more financial resources are likely to generate more financial support for local nonprofit organizations, such as donation and earned income opportunities. These resources in
turn will support nonprofit organizations to get engaged in more complex public service supporting activities. Although resource-poor communities are likely to generate more demand for coproduction, existing research has consistently shown that supply-side considerations are more important in terms of generating philanthropic support and citizen engagement in public service provision. Grønbjerg and Paarlberg (2001) found that income and education were positively related to the density of nonprofit organizations in local communities. Using the case of k-12 public education, Paarlberg and Gen (2009) also found that community’s human and financial resources had significant positive impact on the formation and magnitude of nonprofit support for public services. I therefore expect community’s human and financial resources to increase the likelihood of nonprofits’ involvement in co-governance.

**Hypothesis 1-1:** The likelihood of a nonprofit’s involvement in public service planning and design is positively correlated with the level of financial and human resources of the community in which the nonprofit operates.

**Community Stability**

In addition to a community’s financial and human resources, community stability also plays an important role in shaping citizens’ willingness and long-term commitment to supporting public services. Getting involved in the planning and design of public services requires extensive investments from citizens in the community. It is not likely to happen when residents come and go, thus not being able to enjoy the long-term benefits of such investments. More stable communities are also more likely to have a higher level of trust between citizens and government officials. In the context of parks and recreation services, a park master plan process can easily
take years and require multiple public meetings to get the plan finalized and passed. Without committed residents in the community and a certain level of community stability, it is very challenging for nonprofits to stay through this complicated process. The local homeownership rate is often used in previous literature as indicators of community stability and citizens’ long-term commitment to the community (Paarlberg & Yoshioka, 2016).

**Hypothesis 1-2:** The likelihood of a nonprofit’s involvement in public service planning and design is positively correlated with the stability of the community in which the nonprofit operates.

**Social Diversity**

Social diversity is one of the key reasons for nonprofits to engage in public goods provision. Because of the constraints of the democratic voting system, local governments tend to produce public goods at the level that satisfied the median voter (Hansmann, 1987; Weisbrod, 1988). A more socially diverse community represents more heterogeneous demands for local public goods provision, therefore presenting challenges for local governments to meet the demand of all their citizens. These residents who are unsatisfied with the current level of public good provision by local government, or the high demanders, are likely to create and support nonprofit organizations to satisfy these unmet demands. It also increases the likelihood of nonprofits’ involvement in public service design and planning. Based on such rationale, the following hypothesis can be developed:
**Hypothesis 1-3:** The likelihood of a nonprofit’s involvement in public service planning and design is positively correlated with the social diversity of the community in which the nonprofit operates.

**Government Capacity**

The ability of local authorities in providing certain services is another factor that may influence whether nonprofits decide to fill in the gap and provide multiple services, especially when those nonprofits do not rely on governments for funding. Therefore, everything else being equal, I propose that it is more likely for nonprofits to get involved in co-governance when the capacity of local government is relatively weak in meeting the demand of local citizens. Compared with contracting out public services to nonprofit organizations, involving nonprofits formally in public service design and planning requires extensive trust or even some level of desperation of the government sector. Empirical research also found that governments are reluctant to involve nonprofits in governance since it means giving up control to nonprofits (Tsukamoto & Nishimura, 2006). Most local government-nonprofit relationships are still dominated and controlled by governments (Gazley, 2008). Through the lens of resource dependence theory, this typical power imbalance between governments and nonprofits are mainly caused by resource dependence relationships (Malatesta & Smith, 2014). When nonprofits depend on governments for funding to sustain themselves and deliver services, scholars found that nonprofits tend to reduce their efforts in advocacy and political activities (Guo & Saxton, 2010). Similar logic can be applied to public service planning and design. When governments suffer from fiscal distress and rely on non-governmental revenue sources, especially for functional departments that are in a relatively low position in local government budgetary priorities, it is more likely for them to
open the platform for co-governance with nonprofit organizations. I use the “proportion public spending in a public service arena” to indicate the relative government capacity in fulfilling such functions on their own.

**Hypothesis 1-4:** The likelihood of a nonprofit’s involvement in public service planning and design is negatively correlated with the local governments’ capacity in providing corresponding public services.

In addition to factors at the community level, nonprofits’ involvement in public service planning and design is also likely to be determined by the organization’s capacity to conduct those activities. I propose three major indicators of an organization’s capacity for supporting public services: organizational size, organizational age, and the proportion of donative income.

**Organizational Size**

Organizational size is an important predictor of the scope of activities an organization is engaged in because organizations with more financial and human resources are more capable of supporting multiple types of coproduction activities, thus more likely to be engaged in service planning and design activities. Foster and Meinhard (2002) found that smaller organizations were less likely to form formal collaborative relationships with other organizations. In the field of nonprofit advocacy, evidence also consistently shows that an organization’s size is positively correlated with the scope and intensity of its advocacy activities (Guo & Zhang 2014; Mosley, 2010; Child & Grønbjerg, 2007). I use an organization’s annual total expenditure to indicate the size of the organization in this paper.
Hypothesis 1-5: The likelihood of a nonprofit’s involvement in public service planning and design is positively correlated with the size of the organization.

Organizational Age

Organizational age is another factor in influencing a nonprofit organization’s decision in engaging in the co-governance of public services. Older organizations usually have more resources and legitimacy to conduct other types of activities. They are also better aware of the costs and risks of engaging in multiple activities (Minkoff, 2002). Scholars have also shown that public managers’ prior experiences of working with nonprofit organizations can increase their perception of partnership success (Gazley, 2010). Such success would reduce the transaction costs of collaboration and motivate both public and nonprofit managers to get engaged in more complex collaborative activities (Graddy & Chen, 2006), such as the planning and design of public services. Since nonprofits that are older are more likely to have a long working relationship with local governments, I hypothesize that older nonprofits are more likely to be engaged in the design and planning of public services.

Hypothesis 1-6: The likelihood of a nonprofit’s involvement in public service planning and design is positively correlated with the age of the organization.

Proportion of Donative Revenue

The proportion of donative revenue is another factor that may shape an organization’s decision to participate in different types of coproduction activities. Weisbrod (2000) suggested that sources
of financial support for nonprofits are an important predictor of the behaviors of nonprofit organizations. Based on this intuition, Young (2007) developed a benefits theory of nonprofit finance, arguing that “sources of income should correspond with the nature of benefits conferred on, or of interest to, the providers of those resources” (p.341). According to the benefits theory, nonprofits with more private services rely more on earned program revenues, and nonprofits with more public services rely more on donations (Fischer, Wilsker, & Young, 2011). Using detailed revenue and expenditure data from eighty-seven Jewish Community Centers, Wilsker and Young (2010) have shown a significant correlation between revenue sources and the types of services nonprofits provide. Specifically, “expenditures on services of a more private goods nature are associated with greater reliance on earned income while expenditures on services of a more public goods nature are associated with greater reliance on charitable sources.” (p.194) For public service design and planning, it is more likely to be a public good because of its diffused benefits to the whole community. In addition, relying more on charitable sources may increase the legitimacy of nonprofit organizations, thus making the public put more trust on nonprofit organizations for them to participate in the planning and design of public services.

**Hypothesis 1-7:** The likelihood of a nonprofit’s involvement in public service planning and design is positively correlated with its proportion of donative income.

In summary, by reviewing the literature about community philanthropy and coproduction, the paper develops a framework and generates seven testable hypotheses about nonprofits’ involvement in the co-governance of public services, both at the community and the organizational level. These complex relationships are tested in the case of nonprofit support for parks and recreation services in large U.S. cities. In the following sections, the context of this
research, data and methodology, and the findings and implications of this research are presented in order.

**Context: Nonprofit Support for Parks and Recreation Services**

This paper is situated in the context of local parks and recreation services where nonprofits are documented to actively collaborate with local governments to provide these important public services (Cheng, 2016; Pincetl, 2003). Because of the trend of rapid urbanization (United Nations, 2014), urban parks and open green spaces are of great strategic importance for the quality of life for citizens who live in urban areas. They provide multiple environmental and social benefits to the community such as protecting drinking water, managing stormwater, cleaning the air, facilitating healthy lifestyles, reducing stress, and community regeneration (Crompton, 2008). Despite all these benefits city parks provide to citizens, parks and recreation services are still viewed by elected officials or city managers as nonessential or relatively discretionary, therefore prone to budget cuts (Skidmore & Scrsone, 2011). Because of such constraints facing the parks departments, nonprofits or citizen groups are documented to play a very important role in financing and supporting parks and recreation services (Harnik & Martin, 2015; Walls, 2014).

Nonprofits can and are documented to be involved in different phases of parks and recreation services. They can help parks departments raise money, organize volunteers, conserve natural resources, run facilities, or provide educational or recreational programs (Gazley, Cheng, & LaFontant, 2015). To guide all these efforts, a master plan is needed to serve as a blueprint and
visionary document for the park development. With a master plan, park managers can make conscientious decisions about the construction and improvement of parks, especially when certain opportunities or conflicts arise. Coupled with multiple benefits of park master plans, the development of such plans is a very time-consuming and costly process, with one master plan easily costing more than $200,000 (Harnik & Martin, 2015). It also requires extensive inputs from citizens and experts. Although far less prevalent compared other park-supporting activities, scholars have documented a rise in the involvement of nonprofit organizations in park planning and provision (Pincetl, 2003). It is an important question to ask why some nonprofits step further to get involved park planning activities, and its potential consequences for the quality of parks and recreation services.

Data and Method

I explore the determinants of nonprofits’ participation in the co-governance of public services through a multilevel logistic regression analysis of multiple data sources. Data for this study come from the U.S. Census, the National Center for Charitable Statistics, the Fiscally Standardized Cities (FiSC) database, and content analysis of selected organizations’ websites and 990 forms. Park-supporting charities are identified through a joint procedure of keyword search of the 2013 National Center for Charitable Statistics (NCCS) Core PC Files and following the National Taxonomy of Exempt Entities (NTEE) codes. One limitation of using the NCCS dataset is that it is more likely to capture charities that are more formalized and larger (more than $50,000 in annual revenues). Due to the constraints of government finance data, the search was limited to the 150 largest U.S. cities. Organizations in the final sample for statistical analysis meet two criteria: 1) the nonprofit is set up with the main purpose of supporting local public
park(s); 2) the nonprofit should at least have an active website to provide information for activity coding. After implementing a sequence of such strategies, the final analysis includes 204 park-supporting nonprofits in 75 large U.S. cities.

Variables and Data

The dependent variable of this study, Park Planning, is a dummy variable that measures whether a park-supporting nonprofit organization has been involved in developing the master plan for a public park. This variable is constructed by content analysis of the websites and 990 forms of selected organizations. The variable was coded as 1 if their websites specifically mentioned their involvement in developing the master plan for a park. To draw comparisons with other supporting activities these nonprofits are engaged in, the author also included other types of park supporting activities in the coding protocol. These additional supporting categories include park management, advocacy, fundraising, natural resource conservation and maintenance, volunteer recruitment, education and outreach, offering recreational programs, construction of facilities, and member-serving activities.

Several independent variables are constructed by following the major components of the proposed theoretical framework. Data about community characteristics come from the 2010 U.S. Census and data about public finance come from the 2012 Fiscally Standardized Cities (FiSC) database. One advantage of the FiSC database is that it captures public spending on parks and recreation services from overlapping jurisdictions, such as city governments, county governments, and special park districts, thus making the data comparable to large U.S. cities.
(Lincoln Institute of Land Policy, 2017). All information at the organizational level comes from the 2013 NCCS Core PC Files.

Modifying the racial homogeneity measurement proposed by Paarlberg and Gen (2009), community’s social diversity is measured by the following formula, using the proportion of different racial groups in the community:

$$\text{Social Diversity} = 1 - \sum (n_i/N)^2$$

$n_i$ is the population of racial group $i$ in the community. $N$ is the total population of the community. Six racial groups are captured in the dataset, which includes white, black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, and others. The social diversity index ranges from 0 to 1, where 0 represent perfect racial homogeneity (only one race in the community).

Community’s financial and human resources are measured as the log of median household income, the log of median housing value, and the percentage of residents with a college degree or above in the selected county. Since these three variables are highly correlated (>0.7), a community resource index is created using factor analysis with these three variables. The retained principal factor has an eigenvalue of 2.494, and captures more than 90% of the variations of these three variables. Community stability is measured as the homeownership rate in the community. The proportion of public spending on parks is calculated by local government’s spending on parks and recreation services as a percentage of its total expenditures.
The percentage of residents voted for the Democratic candidate in the most recent presidential election is included as a control variable for the political ideology of the community.

At the organizational level, organizational size is measured as the log of total expenditures of the organization. The age of the organization is operationalized by subtracting its reported ruling year (the year an organization’s 501(c)(3) status was granted by the IRS) from the baseline year. Although organizations can operate as unregistered charities prior to IRS recognition, the effect should not add more bias. Finally, the proportion of donative income is calculated by dividing the organization’s total annual income over its total public contributions.

Multicollinearity among above independent variables was tested by calculating the variance inflation factor (VIF) for a linear regression model. Results suggest that multicollinearity is of limited concern for independent variables included in the final model. Table 1-1 and Table 1-2 present the descriptive statistics and correlation matrix of all the dependent and independent variables. From the descriptive statistics, we can see that most park-supporting nonprofits heavily rely on donative income, with a mean of 80% of the total revenue. Local governments spend less than 3% of their total budget on parks and recreation services. Before running the multivariate analysis, all independent variables are standardized, subtracting the average and dividing by the standard deviation, to facilitate comparability of the relative importance of predictor variables.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Observations</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park Planning</td>
<td>204</td>
<td>0.270</td>
<td>0.445</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Log Total Expenditure</td>
<td>204</td>
<td>12.247</td>
<td>2.460</td>
<td>0</td>
<td>17.628</td>
</tr>
<tr>
<td>Organizational Age</td>
<td>204</td>
<td>19.417</td>
<td>11.20</td>
<td>2</td>
<td>63</td>
</tr>
<tr>
<td>Percentage Donative Revenue</td>
<td>204</td>
<td>80.061</td>
<td>28.269</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td><strong>City/County Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage Park Spending of City Budget</td>
<td>204</td>
<td>2.890</td>
<td>1.721</td>
<td>0.169</td>
<td>8.231</td>
</tr>
<tr>
<td>Social Diversity Index</td>
<td>204</td>
<td>0.199</td>
<td>0.172</td>
<td>0.030</td>
<td>0.609</td>
</tr>
<tr>
<td>Community Resource Index</td>
<td>204</td>
<td>0</td>
<td>1</td>
<td>-1.917</td>
<td>2.021</td>
</tr>
<tr>
<td>Homeownership Rate</td>
<td>204</td>
<td>50.464</td>
<td>13.256</td>
<td>20.8</td>
<td>74.2</td>
</tr>
<tr>
<td>Percentage Votes to Democratic Candidate</td>
<td>204</td>
<td>69.243</td>
<td>14.138</td>
<td>0</td>
<td>89.3</td>
</tr>
</tbody>
</table>

Note: log median housing value, log median household income, and percentage residents with a college degree or above are used to create a community resource index that is finally included in the multilevel analysis.
Table 1-2: Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Park Planning</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Log Total Expenditure</td>
<td>0.11</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Organizational Age</td>
<td>-0.16</td>
<td>0.24</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Percentage Donative Revenue</td>
<td>0.16</td>
<td>0.15</td>
<td>-0.03</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Percentage Park Spending of City Budget</td>
<td>-0.12</td>
<td>-0.04</td>
<td>0.04</td>
<td>-0.07</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Social Diversity Index</td>
<td>0.04</td>
<td>0.03</td>
<td>0.07</td>
<td>-0.05</td>
<td>0.36</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Community Resource Index</td>
<td>-0.03</td>
<td>0.10</td>
<td>0.13</td>
<td>-0.03</td>
<td>-0.11</td>
<td>-0.27</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Homeownership Rate</td>
<td>0.14</td>
<td>-0.13</td>
<td>-0.11</td>
<td>0.05</td>
<td>0.23</td>
<td>0.22</td>
<td>-0.62</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>9. Percentage Votes to Democratic Candidate</td>
<td>-0.11</td>
<td>0.05</td>
<td>0.10</td>
<td>-0.03</td>
<td>-0.10</td>
<td>-0.11</td>
<td>0.40</td>
<td>-0.67</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Statistical Analysis**

Exploratory factor analysis is conducted for all supporting activities of park-supporting nonprofits to see whether there are certain patterns in the data that suggest co-governance, or park planning and design, is a distinct type of nonprofit support for public services. Since all types of park supporting activities are dummy coded, the estimates of the tetrachoric correlation coefficients of the binary variables are first calculated. The pairwise correlation matrix is then used to perform the standard factor analysis (StataCorp, 2013).

A multilevel logistic regression is conducted to test the theoretical framework of the determinants of nonprofit co-governance of public services. This statistical method is used to take care of the nested structure of the data and the nature of the dependent variable: park-
supporting nonprofits are nested in cities and the dependent variable for the model in binary. When the dependent variable is binary, therefore not following a normal distribution, the regular ordinary least squares regression may generate biased estimates. Because the data is nested in hierarchical structures, observations in the dataset are no longer independent from each other. Multilevel logistic regression is in place to take care of the above limitations and generate unbiased estimates. Robust standard errors are used in the model to deal with the heteroskedasticity of residuals.

**Empirical Findings and Results**

Table 1-3 presents the count of different types of supporting activities conducted by those park-supporting nonprofits. According to Table 1-3, most park-supporting nonprofits get involved in providing financial or volunteer assistance to the maintenance and operation of parks. However, relatively few have engaged in park planning and advocacy activities. This finding corresponds to previous empirical evidence that co-governance is yet to become a major type of nonprofit support for public services (Tsukamoto & Nishimura, 2006). Out of these supporting activities that do show some prevalence (at least 10%), nonprofits serving as the manager of parks generate the lowest frequency (12.74%). In other words, although park-supporting nonprofits are actively involved in different aspects of park management and maintenance, it is still very unlikely for local governments to delegate full park management responsibilities to nonprofits. This may be an emerging phenomenon worthy of further exploration.
Table 1-3: Supporting Activities of City Park-supporting Nonprofits

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Supporting Activities (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 204</td>
</tr>
<tr>
<td>1. Participating in developing the master plan for the park</td>
<td>56 (26.96%)</td>
</tr>
<tr>
<td>2. Managing the daily operation of the park</td>
<td>26 (12.74%)</td>
</tr>
<tr>
<td>3. Advocating for park funding and park policy</td>
<td>44 (21.57%)</td>
</tr>
<tr>
<td>4. Fundraising – e.g., raising philanthropic funds for the benefit of a public park.</td>
<td>198 (97.05%)</td>
</tr>
<tr>
<td>5. Natural resource maintenance and construction – e.g., volunteer day for trail construction</td>
<td>145 (71.08%)</td>
</tr>
<tr>
<td>6. Volunteer recruitment and management – e.g., NPO provides an internet portal for volunteer recruitment</td>
<td>152 (74.51%)</td>
</tr>
<tr>
<td>7. Public education and outreach—e.g., volunteer led nature education.</td>
<td>121 (59.31%)</td>
</tr>
<tr>
<td>8. Offers recreation programs – e.g., organizing a sports league, concerts or other cultural events.</td>
<td>99 (48.53%)</td>
</tr>
<tr>
<td>9. Erection or Construction of Facilities</td>
<td>118 (57.84%)</td>
</tr>
<tr>
<td>10. Membership organization</td>
<td>83 (40.69%)</td>
</tr>
</tbody>
</table>

*Note:* Park-supporting nonprofits can conduct activities listed in the table simultaneously. Therefore, the total frequency adds up to be much larger than 100%. Only activities with more than 10% frequency are reported here to represent the major types of supporting activities of these nonprofits. The activity coding follows a grounded theory approach proposal by Gazley, et al (2015). Some of the dropped activities include consulting, grant-making, serving as funding intermediaries, and conducting research.
The result of the exploratory factor analysis is presented in Table 1-4. Activities that are bolded in a column indicates that the underlying factor captures most of the variance of the activity. According to Table 1-4, park-supporting activities conducted by these nonprofits can be explained by three underlying factors (eigenvalues larger than 1). Park planning loads predominantly on a distinct factor of its own. Park management and recreational programming have a strong correlation: when nonprofits take the role of managing a park, they are more likely to offer recreational programs at the same time. Advocacy, fundraising, natural resource maintenance, volunteer recruitment, education & outreach, facility construction, and membership organizations load on another distinct underlying factor. There is a distinct pattern of co-governance - park planning - presented in those park-supporting activities.
Table 1-4: Exploratory Factor Analysis of Services by Charities Supporting Federal Parks

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park Planning</td>
<td>1.9652</td>
<td>0.0373</td>
<td>0.0384</td>
</tr>
<tr>
<td>Park Management</td>
<td>0.2797</td>
<td>-0.0067</td>
<td>0.8486</td>
</tr>
<tr>
<td>Advocacy</td>
<td>0.0516</td>
<td>0.3480</td>
<td>-0.2680</td>
</tr>
<tr>
<td>Natural Resource Maintenance</td>
<td>0.1681</td>
<td>0.8164</td>
<td>0.0828</td>
</tr>
<tr>
<td>Volunteer Recruitment</td>
<td>0.1649</td>
<td>0.7531</td>
<td>0.0439</td>
</tr>
<tr>
<td>Education &amp; Outreach</td>
<td>0.0718</td>
<td>0.5875</td>
<td>0.1829</td>
</tr>
<tr>
<td>Recreational Programming</td>
<td>0.0629</td>
<td>0.2272</td>
<td>0.7151</td>
</tr>
<tr>
<td>Facility Construction</td>
<td>0.1472</td>
<td>0.3652</td>
<td>0.1483</td>
</tr>
<tr>
<td>Member Serving</td>
<td>0.0230</td>
<td>0.4030</td>
<td>-0.1109</td>
</tr>
</tbody>
</table>

Note: 1) Some coefficients are bolded for ease of interpretation.

2) Fundraising is not included in the factor analysis for two reasons. First, almost all organizations are involved in fundraising and there are few variations in the data to contribute to the factor analysis. Second, it is hard to tell whether the fundraising activity is for the support of nonprofit organizations themselves or projects in parks.

Most other activities concentrate on the implementation of public services, which could fall under either the co-management or the co-production model. According to Brandsen and Pestoff’s (2006) conceptualization, co-management mainly focuses on interactions at the organizational level while coproduction on the voluntary efforts of citizens (p.497). The results of the factor analysis seem to point out something beyond this citizen vs. organization distinction, since these can be organizational level and citizen level activities for both underlying factors. For example, both offering educational programs and offering recreation programs can be organizational level activities. The key difference between the two seems to be the nature of the benefits. When nonprofits manage a public park, they are more likely to offer recreational
programs, which mainly offer individual level benefits. Recreational programs are also an important source of revenue for running the parks. For other supporting activities that load on another factor, such as natural resource maintenance and fundraising, the corresponding benefits are diffused to other park users and the community, thus falling under the category of collective coproduction (Brudney & England, 1983).

The results of the multilevel analysis are presented in Table 1-5. The model fit indexes indicate that utilizing the multilevel logistic regression presents a statistically significant model improvement compared with a normal logistic regression model. The intraclass correlation coefficient (ICC) is 0.122, suggesting that 12.2% variations of the data can be solely explained by the correlations caused by the hierarchical structure of the data (Snijders & Bosker, 2012). Both the raw coefficients and factor change in odds are reported for each independent variable to facilitate interpretations. The dependent variable is whether a nonprofit is involved in developing the master plan for the park(s). In the following paragraphs, I will run through each hypothesis to examine whether it is supported or not supported by the results of this multilevel analysis.
Table 1-5: Multilevel Logistic Regression Results

<table>
<thead>
<tr>
<th>DV: Park Planning</th>
<th>Raw Coefficients</th>
<th>Factor Change in Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Capacity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Size</td>
<td>0.436* (0.231)</td>
<td>1.547</td>
</tr>
<tr>
<td>Organizational Age</td>
<td>-0.474*** (0.160)</td>
<td>0.623</td>
</tr>
<tr>
<td>Proportion Donative Revenue</td>
<td>0.367 (0.251)</td>
<td>1.443</td>
</tr>
<tr>
<td><strong>Community Capacity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage Park Spending of City Budget</td>
<td>-0.487** (0.241)</td>
<td>0.614</td>
</tr>
<tr>
<td>Social Diversity Index</td>
<td>0.257* (0.149)</td>
<td>1.293</td>
</tr>
<tr>
<td>Community Stability</td>
<td>0.653*** (0.214)</td>
<td>1.921</td>
</tr>
<tr>
<td>Community Resource Index</td>
<td>0.390** (0.160)</td>
<td>1.477</td>
</tr>
<tr>
<td>Percentage Votes to Democratic Candidate</td>
<td>0.013 (0.280)</td>
<td>1.013</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.188*** (0.167)</td>
<td></td>
</tr>
<tr>
<td>Number of Observations</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td>Number of Groups</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Intraclass Correlation</td>
<td>12.20%</td>
<td></td>
</tr>
</tbody>
</table>

Note: DV = dependent variable. DLR test vs. logistic model: chi2(0) = 0.00. Robust standard errors are in parentheses. Significance Level: * p < 0.10, ** p < 0.05, *** p < 0.01

The hypotheses about community’s financial and human resources, community stability, and social diversity are supported by the analysis, although the coefficient for the social diversity variable is only marginally significant (p = 0.083). There is no statistically significant relationship between nonprofits’ involvement in co-governance and the political ideology of the community. Compared with other coefficients, community stability, which is measured as homeownership rate, presents the strongest influence on nonprofits’ involvement in co-
governance. A standard deviation increase in the homeownership of the community increases the odds of nonprofits’ involvement in co-governance by a factor of 1.921. Community’s financial and human resources and the social diversity of the community have an impact of 1.477 and 1.294 respectively. Above results indicate that nonprofits are more likely to be involved in co-governance when the community is stable, resourceful, and has more heterogeneous demands for public services.

Hypothesis 1-4 predicts that nonprofits are more likely to be involved in co-governance when local governments have a relatively weaker capacity in providing corresponding public services, measured as the percentage of public spending on parks and recreation services. The regression result supports this hypothesis. A standard deviation increase in the percentage parks spending of city budget decreases the odds of nonprofits’ involvement in co-governance by a factor 0.614. This finding suggests that local governments are more likely invite nonprofits to the co-governance regime when they suffer from resource and capacity constraints. It also suggests that the interdependence patterns consistently found in social services or the contracting out regime (Salamon, 1987; Lecy & Van Slyke, 2013), where nonprofits serve as an alternative mechanism for public service delivery, may not be applicable to the setting where nonprofits are involved in the planning and formulation of public services or policies.

In terms of the impact of organizational capacity, the hypothesis about organizational size is marginally supported by the analysis (p = 0.059). There is no statistically significant relationship between nonprofits’ involvement in co-governance and their reliance on donative income. This
result may be driven by the fact that most nonprofits in the dataset rely heavily on donative income (mean = 80%). A standard deviation increase in the total organizational expenditure increases the odds of nonprofits’ involvement in co-governance by a factor of 1.547. Larger nonprofits are more likely to be involved in public service planning and design.

The hypothesis about organizational age is not supported by the regression result. Contrary to the prediction of the theoretical model, older organizations are less likely to get involved in co-governance. A standard deviation increase in the age of the organization decreases the odds of nonprofits’ involvement in co-governance by a factor of 0.623. This result suggests a level of “structural inertia” of nonprofit support for public services in the sense that when nonprofits are stable in the co-productive relationship with local governments, it is difficult for them to move beyond existing patterns of interactions to get involved in co-governance. It also suggests nonprofits’ involvement in co-governance is a new phenomenon of public service provision: younger and larger nonprofit organizations push the boundaries of the status quo, moving nonprofit support for public services beyond co-production to co-governance.

Conclusion

This study seeks to build an understanding of nonprofit support for public services through the lens of co-production and co-governance. By a content analysis of 204 park-supporting nonprofits’ websites and developing a theoretical framework for nonprofits’ involvement in the co-governance of public services, this paper empirically investigates whether co-governance is a distinct type of nonprofit support for public services, and under what circumstances nonprofits
are more likely to be involved in the planning and design of public services. The findings of exploratory factor analysis suggest that co-governance, although not as prevalent, is indeed a distinct type of nonprofit support for public services. The multilevel logistic regression analysis suggests that nonprofits are more likely to get involved in co-governance when they are larger and younger, and operate in communities which are resourceful, stable, socially diverse, and have weak government capacity in providing corresponding public services. The proportion of donative income is not a determinant of nonprofits’ involvement in co-governance. Finally, this paper suggests that co-governance of nonprofits in public service provision is a new form of nonprofit support for public services and requires further theory development and testing.

One limitation of this study is the accuracy of determining whether a nonprofit involves in developing the master plan for a park based on the content analysis of its website. I fully recognize the possibility and potential bias of missing organizations that get involved in the planning of parks but have failed in reporting it on their websites. However, since the master plan not only plays a significant role in park development, but is instrumental for park-supporting nonprofits to raise money for parks (Harnik & Martin, 2015), it is unlikely that park-supporting nonprofits engage in but do not report this important activity on their websites. Another limitation is that this study only focuses on larger nonprofit organizations that operate in large U.S. cities. Data constraints mainly cause this limitation: the NCCS dataset only tracks nonprofits that reach a certain annual revenue threshold, and FiSC database only provides government finance data for the largest 150 U.S. cities. Cautions need to be taken when generalizing the findings of this study to park-supporting groups that are small, informal, or operate in less populous communities.
Future research should be conducted in other public service subsectors to see whether this theoretical framework holds. Even for parks and recreation services, which has witnessed an emerging trend of local governments relying on nonprofits for funding and programs, nonprofits’ involvement in co-governance is not as prevalent compared with other types of public service supporting activities. Scholars should pay close attention to this trend of nonprofits moving upward in the phases of public service provision as governments at all levels suffer from extensive fiscal stress. Nonprofits’ involvement in the co-governance of public services is also likely to have different meanings for different public service subsectors, such as public education, public libraries, museums and art centers.

Another extension of this research is about the distributional, performance, and democratic consequences of co-governance. Findings from this research suggest that co-governance is more likely to take place when participating nonprofits are larger, younger, and operate in more resourceful communities. However, what are the consequences of nonprofits’ involvement in co-governance? Is this a process of mobilizing genuine citizen participation or just inviting another special interest group to the table? Are disadvantaged groups in the community better or worse off as a result of co-governance? Does co-governance result in better public service outcomes? These questions have huge implications about how public services should be planned, designed, and implemented. Both quantitative and qualitative approaches will be needed to answer these important questions.
Fundamentally, this study suggests that co-governance is a distinct type of nonprofit support for public services and we need to develop a better understanding of its processes and outcomes. It is important to bridge the distinction of production and provision in public services, and pay close attention to the role of nonprofit organizations in both phases. The process of nonprofits moving from the co-production phrase to the co-governance phase seems not to be an automatic process. It requires the demand of local governments and citizens, and extensive resource inputs from both the community and nonprofit organizations themselves. The theoretical and policy implications of this study is huge as public management scholarship moves from new public management to new public governance, and public managers are facing extensive challenges in sustaining the desired level of public services and solving complex social problems on their own.
CHAPTER 2
NONPROFIT SPENDING AND GOVERNMENT PROVISION OF PUBLIC SERVICES:
TESTING THEORIES OF GOVERNMENT-NONPROFIT RELATIONSHIPS

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 paper suggests that government-nonprofit relationships are not identical when the direction of funding flow differs in subsectors. The critical mass theory and non-linear models are promising ways of disentangling complex relationships between nonprofits and governments.
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 & McGuire; 2001; Salamon, 2002; Kettl, 2006; O’Toole, 1997). Milward and Provan (1993, p.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 (1993) 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 & 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. Because 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). Existing literature on government-nonprofit collaboration also tends to focus more on the influence of government funding on nonprofit finances and activities (Gazley & 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 that are 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 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 & Van Slyke, 2013; Grønbjerg & 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, p.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 & Scorsone, 2011; Kaczynski & 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, p.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 & 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, p.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 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 & 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, p.150). Based on the market niche model, the following hypothesis can be drawn:

**Hypothesis 2-1**: 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, p.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 & 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 & 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 2-2:** 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, & 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 & 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, p.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 2-3:** 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. 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, 2017). 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

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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.
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, 2017). 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 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. To achieve both efficiency and comprehensiveness, a carefully designed three-step approach was used to identify those park-supporting charities. Each identified park-supporting charity 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

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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 regression⁴.

**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 model⁵. 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 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 2-1 and Table 2-2 provide the summary

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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.
statistics for each of the variables finally included in the panel dataset, including their overall, between, and within variations.

Table 2-1: Descriptive Statistics of the Dependent Variables

<table>
<thead>
<tr>
<th>Park Expenditure Categories</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log of total direct expenditures</td>
<td>overall</td>
<td>17.253</td>
<td>1.269</td>
<td>11.708</td>
<td>21.040</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>1.214</td>
<td>13.870</td>
<td>20.608</td>
<td>n = 149</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.380</td>
<td>13.295</td>
<td>19.508</td>
<td>T = 24</td>
</tr>
<tr>
<td>Log of non-capital expenditures</td>
<td>overall</td>
<td>16.976</td>
<td>1.188</td>
<td>11.677</td>
<td>20.484</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>1.150</td>
<td>13.626</td>
<td>20.255</td>
<td>n = 149</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.312</td>
<td>13.284</td>
<td>18.868</td>
<td>T = 24</td>
</tr>
<tr>
<td>Log of capital expenditures</td>
<td>overall</td>
<td>14.787</td>
<td>3.451</td>
<td>0</td>
<td>20.251</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>2.628</td>
<td>2.439</td>
<td>19.311</td>
<td>n = 149</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>2.246</td>
<td>-0.469</td>
<td>26.238</td>
<td>T = 24</td>
</tr>
<tr>
<td>Percentage total direct expenditures</td>
<td>overall</td>
<td>3.627</td>
<td>2.203</td>
<td>0.014</td>
<td>-0.950</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>1.685</td>
<td>0.893</td>
<td>8.856</td>
<td>n = 149</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>1.426</td>
<td>-1.283</td>
<td>33.429</td>
<td>T = 24</td>
</tr>
<tr>
<td>Percentage non-capital expenditures</td>
<td>overall</td>
<td>3.138</td>
<td>1.647</td>
<td>0.15</td>
<td>12.812</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>1.466</td>
<td>0.697</td>
<td>7.619</td>
<td>n = 149</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.760</td>
<td>-1.309</td>
<td>10.806</td>
<td>T = 24</td>
</tr>
<tr>
<td>Percentage capital expenditures</td>
<td>overall</td>
<td>6.156</td>
<td>7.182</td>
<td>0</td>
<td>73.815</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>3.593</td>
<td>0.047</td>
<td>17.565</td>
<td>n = 149</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>6.226</td>
<td>-10.439</td>
<td>70.259</td>
<td>T = 24</td>
</tr>
</tbody>
</table>

Note: All the above categories are for parks and recreation services.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total nonprofit expenditures</td>
<td></td>
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</tr>
<tr>
<td>overall</td>
<td>0.942</td>
<td>5.607</td>
<td>0</td>
<td>101.191</td>
<td>N = 3576</td>
</tr>
<tr>
<td>between</td>
<td>5.016</td>
<td>0</td>
<td>59.5112</td>
<td>149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>2.538</td>
<td>-39.520</td>
<td>42.622</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>10.922</td>
<td>0.181</td>
<td>10.403</td>
<td>11.537</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Log of median household income</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>between</td>
<td>0.177</td>
<td>10.510</td>
<td>11.450</td>
<td>n = 149</td>
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</tr>
<tr>
<td>within</td>
<td>0.040</td>
<td>10.742</td>
<td>11.037</td>
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<tr>
<td>overall</td>
<td>12.059</td>
<td>0.467</td>
<td>11.177</td>
<td>14.103</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Log of median housing value</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
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<td>13.827</td>
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<td>0.170</td>
<td>11.292</td>
<td>12.616</td>
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<td>overall</td>
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<td>7.793</td>
<td>17.680</td>
<td>79.600</td>
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<tr>
<td>Percentage homeownership</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
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<td>20.478</td>
<td>77.866</td>
<td>n = 149</td>
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</tr>
<tr>
<td>within</td>
<td>1.700</td>
<td>50.722</td>
<td>67.289</td>
<td>T = 24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>12.871</td>
<td>4.150</td>
<td>4.478</td>
<td>30.520</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Percentage population in poverty</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>between</td>
<td>4.044</td>
<td>4.590</td>
<td>25.367</td>
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</tr>
<tr>
<td>within</td>
<td>0.986</td>
<td>5.688</td>
<td>18.53</td>
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<tr>
<td>overall</td>
<td>34.168</td>
<td>2.870</td>
<td>22.420</td>
<td>46.960</td>
<td>N = 3576</td>
</tr>
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<td>Median age</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>2.526</td>
<td>23.503</td>
<td>43.825</td>
<td>n = 149</td>
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<tr>
<td>within</td>
<td>1.377</td>
<td>28.318</td>
<td>39.798</td>
<td>T = 24</td>
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</tr>
<tr>
<td>overall</td>
<td>73.429</td>
<td>14.515</td>
<td>26.622</td>
<td>99.299</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Percentage white</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>14.061</td>
<td>31.473</td>
<td>98.074</td>
<td>n = 149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>3.778</td>
<td>62.214</td>
<td>91.662</td>
<td>T = 24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>26.952</td>
<td>7.366</td>
<td>10.130</td>
<td>59.360</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Percentage bachelor's degree or higher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>6.888</td>
<td>12.605</td>
<td>50.118</td>
<td>n = 149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>2.667</td>
<td>16.720</td>
<td>36.195</td>
<td>T = 24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>49.873</td>
<td>13.774</td>
<td>0</td>
<td>89.300</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Percentage voted for the Democratic candidate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>11.978</td>
<td>0</td>
<td>81.729</td>
<td>n = 149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>6.872</td>
<td>26.827</td>
<td>76.183</td>
<td>T = 24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>37.531</td>
<td>10.597</td>
<td>12.790</td>
<td>71.490</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Percentage intergovernmental revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>9.729</td>
<td>16.643</td>
<td>64.392</td>
<td>n = 149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>4.273</td>
<td>13.929</td>
<td>55.942</td>
<td>T = 24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>26.055</td>
<td>10.173</td>
<td>6.675</td>
<td>72.064</td>
<td>N = 3576</td>
</tr>
<tr>
<td>Percentage property tax revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>9.383</td>
<td>8.897</td>
<td>66.780</td>
<td>n = 149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>4.003</td>
<td>5.902</td>
<td>50.914</td>
<td>T = 24</td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>4.071</td>
<td>7.577</td>
<td>0.163</td>
<td>82.731</td>
<td>N = 3576</td>
</tr>
<tr>
<td>City Population</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td>7.585</td>
<td>0.173</td>
<td>78.237</td>
<td>n = 149</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>0.494</td>
<td>-0.809</td>
<td>8.565</td>
<td>T = 24</td>
<td></td>
</tr>
</tbody>
</table>
**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:

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

\(\ln(\text{GOVEXPARKS})_{i,t}\) 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

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\(^6\) 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.
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 natural 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:

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

Compared with the LDV model, the lagged dependent variable is no longer in the FE model. Instead, \(\mu_i\) and \(\lambda_t\) 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 2-3, table 2-4, and table 2-5. 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.
Table 2-3: FE and LDV Models of Local Governments’ Total Expenditures on Parks

<table>
<thead>
<tr>
<th></th>
<th>DV: Log of Total Expenditures</th>
<th>DV: Percentage Total Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FE</td>
<td>LDV</td>
</tr>
<tr>
<td>Lagged DV</td>
<td>0.897***</td>
<td>(0.0102)</td>
</tr>
<tr>
<td>Nonprofit expenditures</td>
<td>-0.0186***</td>
<td>-0.00300</td>
</tr>
<tr>
<td></td>
<td>(0.00575)</td>
<td>(0.00321)</td>
</tr>
<tr>
<td>Nonprofit expenditures</td>
<td>0.000248***</td>
<td>0.0000739**</td>
</tr>
<tr>
<td>squared</td>
<td>(0.0000557)</td>
<td>(0.0000290)</td>
</tr>
<tr>
<td>Log of median household income</td>
<td>0.968</td>
<td>0.0186</td>
</tr>
<tr>
<td></td>
<td>(0.843)</td>
<td>(0.0941)</td>
</tr>
<tr>
<td>Log of median housing</td>
<td>0.324</td>
<td>-0.00753</td>
</tr>
<tr>
<td>value</td>
<td>(0.197)</td>
<td>(0.0235)</td>
</tr>
<tr>
<td>Percentage homeownership</td>
<td>0.00286</td>
<td>-0.00189</td>
</tr>
<tr>
<td></td>
<td>(0.0170)</td>
<td>(0.00122)</td>
</tr>
<tr>
<td>Percentage in poverty</td>
<td>-0.0392*</td>
<td>-0.00504</td>
</tr>
<tr>
<td></td>
<td>(0.0222)</td>
<td>(0.00346)</td>
</tr>
<tr>
<td>Median age</td>
<td>-0.0394</td>
<td>-0.00368</td>
</tr>
<tr>
<td></td>
<td>(0.0291)</td>
<td>(0.00281)</td>
</tr>
<tr>
<td>Percentage White</td>
<td>0.00763</td>
<td>-0.000657</td>
</tr>
<tr>
<td></td>
<td>(0.00768)</td>
<td>(0.000645)</td>
</tr>
<tr>
<td>Percentage bachelor's degree or higher</td>
<td>-0.0347**</td>
<td>0.00118</td>
</tr>
<tr>
<td></td>
<td>(0.0151)</td>
<td>(0.00110)</td>
</tr>
<tr>
<td>Percentage voted for the Democratic candidate</td>
<td>0.00136</td>
<td>0.000665</td>
</tr>
<tr>
<td></td>
<td>(0.00456)</td>
<td>(0.000639)</td>
</tr>
<tr>
<td>Percentage intergovernmental revenue</td>
<td>-0.00502</td>
<td>-0.00328***</td>
</tr>
<tr>
<td></td>
<td>(0.00339)</td>
<td>(0.000786)</td>
</tr>
<tr>
<td>Percentage property tax revenue</td>
<td>-0.0107**</td>
<td>-0.00380***</td>
</tr>
<tr>
<td></td>
<td>(0.00430)</td>
<td>(0.000790)</td>
</tr>
<tr>
<td>Population</td>
<td>0.166***</td>
<td>0.0253***</td>
</tr>
<tr>
<td></td>
<td>(0.0357)</td>
<td>(0.00304)</td>
</tr>
<tr>
<td>Population squared</td>
<td>-0.000298**</td>
<td>-0.000707***</td>
</tr>
<tr>
<td></td>
<td>(0.000148)</td>
<td>(0.000140)</td>
</tr>
<tr>
<td>Constant</td>
<td>4.338</td>
<td>2.106**</td>
</tr>
<tr>
<td></td>
<td>(8.492)</td>
<td>(0.938)</td>
</tr>
<tr>
<td>Observations</td>
<td>3427</td>
<td>3427</td>
</tr>
<tr>
<td>Rho</td>
<td>0.888</td>
<td>0.637</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td>0.933</td>
</tr>
</tbody>
</table>

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 2-3 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 2-1.
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. In other words, park-supporting charities in a city need to aggregate 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

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7 The smaller number is estimated by the LDV model and the larger number by the FE model.
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. 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. 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. This is a strong decreasing effect, although this decreasing effect becomes smaller as nonprofit spending on parks continues to rise.

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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.
Table 2-4: FE and LDV Models of Local Governments’ Non-Capital Expenditures on Parks

<table>
<thead>
<tr>
<th></th>
<th>DV: Log of Non-Capital Expenditures</th>
<th>DV: Percentage Non-Capital Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FE</td>
<td>LDV</td>
</tr>
<tr>
<td>Lagged DV</td>
<td>0.946***</td>
<td>(0.00994)</td>
</tr>
<tr>
<td>Nonprofit expenditures</td>
<td>-0.0235***</td>
<td>(0.00582)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonprofit expenditures squared</td>
<td>0.000225***</td>
<td>(0.0000513)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log of median household income</td>
<td>1.666*</td>
<td>(0.850)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log of median housing value</td>
<td>0.246</td>
<td>(0.196)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage homeownership</td>
<td>0.00126</td>
<td>(0.0133)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage in poverty</td>
<td>-0.0118</td>
<td>(0.0252)</td>
</tr>
<tr>
<td></td>
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</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median age</td>
<td>-0.0285</td>
<td>(0.0325)</td>
</tr>
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<tr>
<td>Percentage White</td>
<td>0.0108</td>
<td>(0.00725)</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage bachelor's degree or higher</td>
<td>-0.0236</td>
<td>(0.0155)</td>
</tr>
<tr>
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<tr>
<td></td>
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<tr>
<td>Percentage voted for the Democratic candidate</td>
<td>0.00222</td>
<td>(0.00421)</td>
</tr>
<tr>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Percentage</td>
<td>-0.00277</td>
<td>(0.00421)</td>
</tr>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intergovernmental revenue</td>
<td>0.00290</td>
<td>(0.00421)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage property tax revenue</td>
<td>-0.00435</td>
<td>(0.00318)</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.123***</td>
<td>(0.0411)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population squared</td>
<td>-0.001022***</td>
<td>(0.000368)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-3.910</td>
<td>(9.243)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>3427</td>
<td>3427</td>
</tr>
<tr>
<td>Rho</td>
<td>0.930</td>
<td>0.966</td>
</tr>
</tbody>
</table>

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
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 2-4, 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.
Table 2-5: FE and LDV Models of Local Governments’ Capital Expenditures on Parks

<table>
<thead>
<tr>
<th></th>
<th>DV: Log of Capital Expenditures</th>
<th>DV: Percentage Capital Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FE</td>
<td>LDV</td>
</tr>
<tr>
<td>Lagged DV</td>
<td></td>
<td>0.632***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0316)</td>
</tr>
<tr>
<td>Nonprofit expenditures</td>
<td>0.0303</td>
<td>0.0242</td>
</tr>
<tr>
<td></td>
<td>(0.0322)</td>
<td>(0.0148)</td>
</tr>
<tr>
<td>Nonprofit expenditures</td>
<td>0.000154</td>
<td>0.0000899</td>
</tr>
<tr>
<td>squared</td>
<td>(0.000249)</td>
<td>(0.000122)</td>
</tr>
<tr>
<td>Log of median household</td>
<td>-6.909*</td>
<td>-0.301</td>
</tr>
<tr>
<td>income</td>
<td>(3.844)</td>
<td>(0.648)</td>
</tr>
<tr>
<td>Log of median housing</td>
<td>1.718**</td>
<td>-0.0465</td>
</tr>
<tr>
<td>value</td>
<td>(0.861)</td>
<td>(0.173)</td>
</tr>
<tr>
<td>Percentage homeownership</td>
<td>0.0150</td>
<td>-0.00133</td>
</tr>
<tr>
<td></td>
<td>(0.0681)</td>
<td>(0.00850)</td>
</tr>
<tr>
<td>Percentage in poverty</td>
<td>-0.261**</td>
<td>-0.0408</td>
</tr>
<tr>
<td></td>
<td>(0.121)</td>
<td>(0.0259)</td>
</tr>
<tr>
<td>Median age</td>
<td>-0.310**</td>
<td>-0.0517***</td>
</tr>
<tr>
<td></td>
<td>(0.135)</td>
<td>(0.0197)</td>
</tr>
<tr>
<td>Percentage White</td>
<td>0.0474</td>
<td>-0.00476</td>
</tr>
<tr>
<td></td>
<td>(0.0379)</td>
<td>(0.00516)</td>
</tr>
<tr>
<td>Percentage bachelor's degree or higher</td>
<td>0.00459</td>
<td>0.00954</td>
</tr>
<tr>
<td></td>
<td>(0.0710)</td>
<td>(0.00822)</td>
</tr>
<tr>
<td>Percentage voted for the Democratic candidate</td>
<td>-0.00323</td>
<td>0.000193</td>
</tr>
<tr>
<td></td>
<td>(0.0269)</td>
<td>(0.00487)</td>
</tr>
<tr>
<td>Percentage intergovernmental revenue</td>
<td>-0.000376</td>
<td>-0.0260***</td>
</tr>
<tr>
<td></td>
<td>(0.0216)</td>
<td>(0.00515)</td>
</tr>
<tr>
<td>Percentage property tax revenue</td>
<td>0.0243</td>
<td>-0.0389***</td>
</tr>
<tr>
<td></td>
<td>(0.0244)</td>
<td>(0.00708)</td>
</tr>
<tr>
<td>Population</td>
<td>0.556*</td>
<td>0.154***</td>
</tr>
<tr>
<td></td>
<td>(0.293)</td>
<td>(0.0147)</td>
</tr>
<tr>
<td>Population squared</td>
<td>-0.00573**</td>
<td>-0.00199***</td>
</tr>
<tr>
<td></td>
<td>(0.00238)</td>
<td>(0.000211)</td>
</tr>
<tr>
<td>Constant</td>
<td>77.39*</td>
<td>13.22**</td>
</tr>
<tr>
<td></td>
<td>(43.21)</td>
<td>(6.549)</td>
</tr>
<tr>
<td>Observations</td>
<td>3427</td>
<td>3427</td>
</tr>
<tr>
<td>Rho</td>
<td>0.593</td>
<td>0.370</td>
</tr>
<tr>
<td>R²</td>
<td>0.555</td>
<td>0.308</td>
</tr>
</tbody>
</table>

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
According to Table 2-5, 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 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.

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

This study seeks to understand how the spending of charitable nonprofits created specifically to support city parks influences local governments’ spending on 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 & Paarlberg, 2001; Lecy & 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 in 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\(^\text{10}\), 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 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

\(^{10}\) 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 this study.
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.
CHAPTER 3

GOVERNING PUBLIC-NONPROFIT PARTNERSHIPS:

LINKING GOVERNANCE MECHANISMS TO COLLABORATION STAGES

Abstract:

Public-nonprofit partnerships have become increasingly popular in public service provision, especially when local governments suffer from ongoing fiscal stress. Using a grounded-theory-based comparative case study approach, this paper draws on the experiences of the leaders of government-nonprofit partnerships for public parks in major cities of Ohio River Basin Region to address the questions of how partnerships are governed and how governance mechanisms vary among different stages of the collaboration continuum. Government representation on the nonprofit board, reaching a formal agreement, building relationships, and building leadership capacity stand out as four governance mechanisms for these partnerships. This paper also discusses how these governance mechanisms are likely to play out in different stages of the collaboration continuum.
Introduction

Partnerships between nonprofit organizations and government agencies have received increasing attention from scholars ever since the privatization era in the 1980s (Gazley & Guo, 2015; Gray, 1989). It began as scholars recognized the widespread cooperation between governments and nonprofits in the provision of social and human services in the welfare state (Salamon, 1986 & 1987). The New Public Management (NPM) movement further shifted the role of government agencies from the direct producer of public services to the purchaser of public services (Osborne & Gaebler, 1992), thus highlighting the importance of government-nonprofit partnerships in public service provision. With the focus of outsourcing and contracting out in NPM and privatization, much of the previous literature on public-nonprofit partnerships emphasized the principal-agent relationships between the two sectors (Brinkerhoff, 2002). In such collaborative arrangements, nonprofits are still regarded as an instrument or extension of government agencies, thus having little opportunity in participating in joint decision making or sharing resources with government agencies (Gazley, 2008).

Recent research in public and nonprofit management challenges the assumption that nonprofits are always the weaker actors compared to their government counterparts. Scholars found that nonprofit organizations can become powerful actors and play important roles in financing and supporting public services, such as public education (Neslon & Gazley, 2014), public libraries (Schatteaman & Bingle, 2015), low-income public housing (Fyall, 2016), and public parks and recreation services (Gazley, Cheng, LaFontant, 2015). It is no longer possible to draw a distinct line between governments as financiers and nonprofits as implementers. As tremendous knowledge has been accumulated about public-nonprofit partnerships that are dominated by
contracting out arrangements, there is still relatively little research that focuses on the partnerships where nonprofit organizations play important roles in supporting and determining public services, especially about the governance mechanism for these partnerships to create public value. As society is facing more complex governance problems such as climate change and immigration, and governments at all levels suffer from increasing fiscal stress, these questions are of great practical significance for public and nonprofit managers.

Based on the above motivations and inspired by Austin (2010)’s Collaboration Continuum framework, this study seeks to address the following research question: what are the governance mechanisms for public-nonprofit collaborations, particularly when nonprofits play an important role in supporting and determining public services? And how are these governance mechanisms linked to different stages of the collaboration continuum? This paper seeks the answer to these questions using a grounded theory approach based on interviews with the leaders of government-nonprofit partnerships for public parks in major cities of the Ohio River Basin Region. Several governance mechanisms are identified and their linking mechanisms with collaborative stages are developed.

The purpose of this study is not advocating for one model or one type of public-nonprofit partnerships. Instead, by pointing out the collaborative stages and governance mechanisms for these partnerships, this paper aims at filling the knowledge gap of the governance of collaboration, and provides practitioners with the tools and knowledge to manage different types of government-nonprofit partnerships. Public-nonprofit partnership is broadly defined as a type
of collaborative relationships between governments and nonprofits that involve “the linking and sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by the organizations separately” (Bryson et al., 2006, p.44). This term is used interchangeably in this study with cross-sectoral collaboration because both terms are prevalent in the public management literature to describe similar phenomena.

The paper proceeds as follows. It first reviews the collaboration continuum framework and recent literature of the governance of public-nonprofit partnerships. The next section presents the research context and empirical strategies used by this study. The third section presents the findings of different governance mechanisms used by these partnerships and how they are linked to different stages of the collaboration continuum. The paper concludes by discussing the implications and future steps of this research.

**The Collaboration Continuum Framework**

Because of the complexity of inter-organizational partnerships, scholars advocate for a view of collaborations as multi-stage, multi-dimensional, complex and dynamic processes that are embedded in the larger institutional and social system (Gazley & Guo, 2015). Over the years, there have also been multiple efforts of identifying different forms of inter-organizational partnerships (Austin & Seitanidi, 2012; Agranoff & McGuire, 2004; Herrenz, 2008; Guo & Acar, 2005). This paper uses a modified collaboration continuum framework to map different stages of collaborative relationships. Although this framework was developed in the context of nonprofit-
business partnerships, insights of the collaboration continuum framework can be applied to public-nonprofit partnerships, especially when nonprofits are actively raising support or taking responsibilities for public agencies in partnerships.

The collaboration continuum framework was developed by Austin (2000) to capture the dynamic nature and the evolution of collaboration. In this framework, there are three types or stages of collaborative relationships along the continuum: philanthropic, transactional, and integrative (Austin, 2010). As the relationship evolves along the continuum, the nature of the collaboration also changes, thus presenting different kinds of management and governance challenges for partnership managers. These stages are not discrete but rather overlapped with each other. As Austin (2000, p.72) pointed out: “The continuum is not a normative model; one stage is not necessarily better than another. Movement along the CC is the result of conscious decisions and explicit actions by the partners. Some partners may decide that lower levels of engagement may better suit their situations, objectives, or strategies.” Moving to a higher level of engagement can bring significant collaborative gains. However, it also presents more risks to the partnership and requires more managerial and leadership efforts for coordination. Before sharing more power and responsibilities with their partners, organizations need to make extensive investments to make sure that their partners have the willingness and capacity of fulfilling their commitments. In lower-level collaborative stages, the requirement for such commitment is much lower.

The philanthropic stage refers to the stage when each partner provides input such as money or human resources while they are largely independent of each other. “The nature of the
relationship is largely that of charitable donor and recipient” (Austin, 2000, p.71). In such cases, nonprofits are regarded as a fundraising arm of corresponding public agencies. Although nonprofits can sometimes decide which government programs these donations may go to, they are usually not involved in the decisions about which programs should be offered in parks. Governments list the revenue gap and nonprofits are expected to raise money to meet these needs. A lot of public parks or public library supporting foundations are in this category. They are sometimes created by their government counterparts to fulfill the fundraising role exclusively.

The transactional stage is characterized as “a mutually beneficial relationship in which there are two-way benefit flows that are consciously identified and sought” (Austin, 2000, p.74). In the context of public-nonprofit partnerships, nonprofits and governments may collaborate and coordinate with each other to provide recreational and educational programs to public service users. Compared with the philanthropic stage, nonprofits are not raising money for existing programs or facilities, but also actively mobilizing volunteers and developing relevant programs to support these services. They are in a quasi-transactional relationship with local governments in the sense that nonprofits and public services users get their desired programs and local governments getting monetary and volunteer support. From a public service perspective, this stage of the partnership represents a coproduction of public services with the joint efforts of governments and citizens (Brandsen & Pestoff, 2006). Since the “transaction” between governments and nonprofits are not as calculated as nonprofit-business partnerships, the transactional stage is reframed as the coproducive stage for public-nonprofit partnerships. Partnerships that involve active public service user groups usually fall into this category.
Integrative collaborations are defined as the stage in which the relationship looks like a joint
venture and the mission of the collaboration is central to both organizations’ strategies. “People
and activities begin to merge into more collective action and organizational integration” (Austin,
2000, p.71). In the context of public-nonprofit partnerships, this stage of the relationship is
reached when it is hard to distinguish the role of nonprofits and governments based on traditional
characterizations. Governments and nonprofits essentially merge as a hybrid organization to
jointly plan and manage public services.

The Central Park Conservancy (CPC) and its partnership with the New York City set the golden
standard for this type of relationships. In this partnership, the CPC raises money to manage,
restore, and enhance Central Park while the Parks Commissioners and officials at NYC Parks are
involved in all aspects of park planning, and retain the overall control of Central Park. Although
a clear division of responsibility is still needed for partnerships in this stage, the line between
public and nonprofit is blurred. It represents a high level of functional and strategic integration of
both parties in the partnership.

In summary, the Collaboration Continuum framework provides a useful lens for understanding
how a public-nonprofit partnership may evolve over time. The transactional stage is reframed as
the coproducive stage to make the framework more applicable to public-nonprofit partnerships.
What is noticeable about the collaboration continuum framework is that collaboration stages are
not mutually exclusive. Instead, higher stages of the collaborative relationships contain the
elements of the relatively lower stages (see Figure 3-1). For example, when the collaborative
relationship reaches the integrative stage, partners are still conducting activities that are featured in the philanthropic and coproductive stages.

Figure 3-1: Graphical Illustration of the Collaboration Continuum

Governance of Cross-sectoral Partnerships

Due to different kinds of management challenges presented by these partnerships, the governance of cross-sector partnerships has become a central issue in understanding how these partnerships work (Stone et al., 2010; Vangen et al., 2015). Compared with organizational governance, the governance of partnerships is more elusive since no clear entity may be in charge (Stone et al., 2010). In the literature of the governance of collaborations, structures and processes stand out as the key dimensions of understanding how actors “direct, coordinate, and
allocate resource for the collaboration as a whole and to account for its activities.” (Vangen et al., 2015, p.1244).

Provan and Kenis (2008) provided a starting point for understanding basic governance structures in inter-organizational networks. Participant-governed networks are governed by formal and informal interactions of members and have no separate governance entity in the network. A lead organization structure is a network which has a core powerful organization to coordinate activities and make decisions for network members. A network administration organization structure is a network that has a separate organization formed to manage and coordinate network activities. Stone et al. (2010) used tensions inherent in the collaboration process to explain governance structure variances: inclusivity versus efficiency in member recruitment, flexibility versus stability of networks, internal versus external legitimacy, and the competing objectives among network members.

In addition to governance structures, collective decision-making process and rules are also crucial for the success of collaborative partnerships. Ostrom (1990) used operation rules which govern day to day network activity, policy rules which determine what activities are allowed, sanctioned and monitored in networks, and constitutional rules which decide who can participate in the collective decision-making process and how collective choice rule can be changed, to describe the multilevel institutional components of self-governance systems. Ostrom (1990, 2005) further refined and developed eight essential elements or conditions (also known as the design principles) that characterize robust Common Pool Resource (CPR) institutions: (1) clearly
defined boundaries; (2) proportional equivalence between benefits and costs; (3) collective-choice arrangements; (4) monitoring; (5) graduated sanctions; (6) conflict-resolution mechanisms; (7) minimal recognition of rights to organize; and (8) nested enterprises. Ostrom also showed how those institutional design principles “can affect incentives in such a way that appropriators will be willing to commit themselves to conform to operational rules devised in such systems, to monitor each other’s conformance, and to replicate the CPR institutions across generational boundaries” (p.91). Cox, Arnold, and Tomas (2010) found strong empirical support for these design principles through an analysis of 91 existing empirical studies that directly or indirectly evaluated Ostrom’s (1990) design principles in CPR settings. Given the fact that actors face inherent collective action problems of credible commitment and mutual monitoring in cross-sectoral partnerships, those eight design principles may also be applicable to the governance of such partnerships.

Context

This research takes place in the context of public-nonprofit partnerships for public parks in large U.S. cities. Compared with other public services where governments collaborate with nonprofits in the delivery of public services, several distinct features stand out for these public-nonprofit partnerships. First, parks and recreation is a public service subsector where nonprofits collaborate closely with local governments to solve a public problem. Because of multiple community benefits urban parks and green spaces provide for the city, the management and funding of urban parks are traditionally regarded as a pure government function. However, because of the increasing demand of urban green spaces and the fiscal stress local governments are currently experiencing, local governments lack the capacity and are not expected to do this
alone (Walker, 1999). This is especially true if and when local parks and recreation services are considered a non-essential public service and under pressure of budget cuts (Skidmore & Scorsone, 2011). Such characteristics of parks and recreation services push local governments to explore alternative funding sources and intergovernmental or cross-sector collaboration opportunities.

Public-nonprofit partnerships for city parks can be presented in multiple forms. They can be set up by active park users and focus on volunteering activities and programming support for public parks. A lot of park friends’ organizations and their partnerships with local governments are in this category. These partnerships can also be set up by local governments to raise money for public parks, such as most parks foundations. Recently, there is a movement for private park conservancies which take on the responsibility of managing and operating public parks (Harnik & Martin, 2015). The Central Park Conservancy (CPC) in the city of New York is the pioneer of this movement. It not only raises money for Central Park but is also involved in the planning, design, management, and maintenance of the park, via a formal long-term agreement between the city and the conservancy. The Central Park Conservancy and city’s parks department also created a joint position to facilitate coordination and management (Rosenzweig & Blackmar, 1992). These diverse forms of public-nonprofit partnerships offer an ideal setting for answering the research questions of this paper.
Method

Grounded-Theory-based Comparative Case Study Approach

This paper uses a grounded-theory-based comparative case study method to examine the governance mechanisms of public-nonprofit partnerships and how they are linked to different stages of the collaboration continuum. This method is particularly suitable to generate theory and corresponding hypotheses from the data and cases (George & Bennett, 2005; Gerring, 2006). It is a way of looking at the phenomenon “empirically from the perspectives of those immersed in these arenas” (Agranoff, 2007, p.37). Different from other comparative case study methods, a grounded theory based comparative case study method does not rely on one fixed theory to examine multiple situations or cases. Instead, when analyzing data and cases, the grounded theory based approach allows data collection, analysis, and theory development to occur simultaneously. In other words, the researcher may start with certain theories or theoretical frameworks during the initial research design. However, the researchers allow new theory to emerge from existing data and guide future data collection and analysis strategies. As Strauss and Corbin (1998, p.12) pointed out: “a theory derived from data is more likely to resemble the reality than a theory derived by putting together a series of concepts based on experience or solely through speculation.” It is a very useful approach for public management scholars to “lay out how cutting edge practice can be conceptualized in a way that is useful to academic and practitioner alike” (Agranoff, 2007, p.35).

Following Agranoff and Radin (1991, p.210 to p.216), this study follows the ten steps methodological sequence to carry out this research: 1) literature review and research question
development; 2) case and participant selection and invitation; 3) outline and structure the case studies 4) developing the discussion guide based on the literature and existing info of selected cases; 5) gathering related info about research sites and participants; 6) finalizing the discussion guide based on info already gathered for each case; 7) conducting interviews and site visit; 8) reflections and memos on the impression of the interviews; 9) synthesizing the info gathered from interviews, participant observations, and document analysis to develop the case; 10) analyzing the research questions and comparing across cases. Following these ten steps ensures the flexibility as well as the rigor of this research design.

Content analysis of the nonprofit and government agency’s websites was conducted before carrying out formal interviews and stopping the recruitment of more research participants. This procedure was used to identify the collaborative stages of these partnerships and make sure all three stages are represented in the selected cases. Formal agreements and the memorandum of understanding (MOU) were also gathered from the interviewees before interview meetings. Based on the information on organizations’ websites, agreements of the partnerships, and other web sources, the researcher placed each partnership in different stages of the collaboration continuum.

Semi-structured interviews serve as the primary data for this study. The interviews followed a general discussion guide that would be tailored to each specific interviewee according to existing info gathered about the partnership. The discussion guide included 1) history and the evolution of the partnership; 2) the roles nonprofits and governments play in the partnership; 3) formal
agreement or informal coordination mechanisms of the partnership; 4) communication between nonprofit and government partners 5) mechanisms for addressing disagreements 6) important lessons learned from managing the partnership. Each topic included one to three probing questions to clarify meaning and fostering conversations. All but 1 of the 15 interviews were recorded during the interview process, after getting permissions for the interviewees. Field notes, existing documents, and the interview transcripts were then analyzed by the researcher to classify each partnership according to the collaboration continuum typology, and draw cross-case comparisons of their governance mechanisms.

The collaboration stage of a public-nonprofit partnership is determined by the discussion question: “what role does your organization play in the partnership?” Since parks and recreation services are traditionally provided only by government agencies and governments own these properties, a more integrative partnership often means that governments share more power and responsibilities with partner nonprofits. The partnership is in the philanthropic stage when partner nonprofits are expected to only raise private donations for public parks. The coproducive stage is reached when nonprofits not only raise money but also deliver and provide programming support. The partnership reaches the integrative stage when nonprofits share the management and operational responsibilities with local governments. Using this criterion, the collaboration continuum framework was applied to the selected government-nonprofit partnerships.
Case Selection and Description of Participants

Park supporting nonprofits are identified through a unique city park-supporting nonprofits database that was constructed by the author through a keyword search and the National Taxonomy of Exempt Entities (NTEE) code identification of the 2013 National Center for Charitable Statistics (NCCS) database. This database contains nearly three hundred nonprofit organizations that are set up with a primary purpose of supporting a city or county park in the 149 largest U.S. cities. Geographical locations are narrowed down to the major cities or counties of the Ohio River Region, which include Indianapolis in Indiana, Nashville in Tennessee, Louisville in Kentucky, Cincinnati in Ohio, Columbus in Ohio, and Pittsburgh in Pennsylvania. This region is selected because major cities in this region are usually regarded as peer cities in terms of their social and economic development (Urban Studies Institute, 2014). However, the characteristics of their park systems and the forms of their government-nonprofit partnerships for parks vary significantly. Columbus and Franklin County Metro Parks (overlapped with the city of Columbus), Great Parks of Hamilton County (overlapped with the city of Cincinnati), and Allegheny County (overlapped with the city of Pittsburgh) are included in this study since these governmental agencies also manage public parks that are within the boundaries of these major cities.

The city park-supporting nonprofits database is then matched with the above geographical regions to identify possible public-nonprofit partnerships in this region, since those park-supporting nonprofits often partner with local governments to provide funding, programming, or management support for the entire park system or specific park units. After utilizing this strategy, there were 13 public-nonprofit partnerships identified. Interviewees were then selected and
contacted based on these thirteen partnerships. They are individuals who take key leadership roles in the parks department or the park-supporting nonprofit organization of the partnership, which may include the parks department director, executive director, or the board chair of the nonprofit organization. 25 individuals were finally contacted by the researcher, which include 11 public managers and 14 nonprofit managers. After three rounds of contacts and invitation (first two rounds in email and the third round by phone), 15 individuals representing 11 public-nonprofit partnerships accepted the interview invitation and participated in the study, including 4 public managers and 11 nonprofit managers. The other 10 individuals either declined or did not respond to the research participation request. Interviews were carried out either in person or on the phone, ranging from 30 minutes to 75 minutes. Table 3-1 lists the partnerships, their locations and major purposes.
Table 3-1: Summary of Selected City Park Partnerships

<table>
<thead>
<tr>
<th>CITY</th>
<th>Public Partner</th>
<th>Nonprofit Partner</th>
<th>Main Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louisville, KY</td>
<td>Louisville Metro Parks Department, Louisville Metro Government</td>
<td>21\textsuperscript{st} Century Parks</td>
<td>Creation, maintenance, and management of The Parklands of Floyds Fork.</td>
</tr>
<tr>
<td>Louisville, KY</td>
<td>Louisville Metro Parks Department</td>
<td>Louisville Parks Foundation</td>
<td>Raising financial support for 120 public parks and recreational facilities owned by Louisville Metro Parks Department.</td>
</tr>
<tr>
<td>Indianapolis, IN</td>
<td>Indianapolis Parks &amp; Recreation Department, Indianapolis Department of Public Works</td>
<td>Indianapolis Parks Foundation</td>
<td>Providing resources and raising financial support for Indy’s Parks, trails, greenways, and public spaces.</td>
</tr>
<tr>
<td>Indianapolis, IN</td>
<td>Indianapolis Parks &amp; Recreation Department</td>
<td>Friends of Garfield Park</td>
<td>Providing financial assistance, programming, and maintenance to the Garfield Park.</td>
</tr>
<tr>
<td>Indianapolis, IN</td>
<td>Indianapolis Parks &amp; Recreation Department</td>
<td>Eagle Creek Parks Foundation</td>
<td>Providing financial and volunteer resources above and beyond limited city funding to support essential park projects and programs in the Eagle Creek Park.</td>
</tr>
<tr>
<td>Nashville, TN</td>
<td>Nashville Metro Parks and Recreation Department</td>
<td>Friends of Warner Parks</td>
<td>Providing financial and volunteer support for trail maintenance, educational programs, land acquisition, and facilitate construction in Warner Parks.</td>
</tr>
<tr>
<td>Pittsburgh, PA</td>
<td>The City of Pittsburgh, Pittsburgh Department of Parks and Recreation, Department of Public Works, Department of City Planning</td>
<td>Pittsburgh Parks Conservancy</td>
<td>Forming an alliance to provide improvement, special care, and restoration for the City’s four regional parks.</td>
</tr>
<tr>
<td>City, State</td>
<td>Partnership</td>
<td>Foundation</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
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<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Pittsburgh, PA</td>
<td>County Government of Allegheny, Allegheny County Department of Parks</td>
<td>Allegheny County Parks Foundation</td>
<td>Supporting the improvement, preservation and restoration of nine county parks consisting of 12,000 acres strategically located throughout Allegheny County.</td>
</tr>
<tr>
<td>Columbus, OH</td>
<td>Columbus and Franklin County Metro Parks</td>
<td>Audubon Society of Ohio</td>
<td>Supporting and operating the Grange Insurance Audubon Center located in the Scioto Audubon Metro Park.</td>
</tr>
<tr>
<td>Cincinnati, OH</td>
<td>Great Parks of Hamilton County</td>
<td>Great Parks Foundation</td>
<td>Providing financial assistance for Great Parks of Hamilton County, its facilities, and programs.</td>
</tr>
<tr>
<td>Cincinnati, OH</td>
<td>Cincinnati Parks Department</td>
<td>Cincinnati Parks Foundation</td>
<td>Supporting the conservation and enhancement of city’s parks and green spaces, including the creation of the Smale Riverfront Park.</td>
</tr>
</tbody>
</table>

**Governance Mechanisms for Government-Nonprofit Partnerships**

Following Vangen et al. (2015, p.1244), the governance of these partnerships “entails design and use of a structure and processes that enable actors to direct, coordinate, and allocate resources for the collaboration as a whole and to account for its activities”. Several discussion questions were used to identify the governance mechanisms of the partnerships. These questions include “How do you figure out your roles in the partnership?” “How do you make sure that your partner will continue investing in the partnership and keep the agreement (if there is one)?” and “what do you think is the most important thing in managing the collaborative relationship?” Several recurring themes were developed from the interviews and document analysis. Some of them echoed the
major findings of current research on the governance of collaboration, while some beyond the current state of knowledge.

**Governance of Partnerships as Government Representation on the Nonprofit Board**

Government officials appointing the executive director or sitting on the board of partner nonprofit organizations stands as one common governance mechanism for these partnerships. Out to the 10 partnerships in this study, seven partnerships have this mechanism in place. For the other three partnerships, nonprofits made conscientious decision not to formally place government officials and public managers on the board to keep the independence, or the image of independence of the nonprofits. However, public managers are still invited and actively participating in the board meetings (for one of the partnership, the parks director served as the executive of the partner nonprofit for a long time). Appointing government officials on the board of the partner nonprofit is an easy way of keeping track of what the partner nonprofit is doing in the park. From the perspective of the partner nonprofit, having government officials on their board would increase their legitimacy and provide open channels of communication with public officials (Malatesta & Smith, 2014). However, it may also represent a certain degree of government control over the partner nonprofit, thus resulting in negative consequences for the partnership such as the confusion for potential donors.

Similar practices have been found in social and human services nonprofits which rely extensively on governments for funding (Guo, 2007; Van Slyke, 2007; Grønbjerg, 1993). These nonprofits are also seeking board members that have governmental affiliations to obtain
government funding. However, in the case of government-nonprofit partnerships for parks, government officials sitting on the nonprofit board is usually a condition of the formal partnership agreement. These board members with government affiliations are usually ex officio members of the nonprofit board, which means that such board members are appointed only because of their current position in the government.

By appointing government officials as ex officio members of the nonprofit board, local governments establish a formal mechanism in transforming the governance of a partnership to the governance of a single organization, which is less elusive and facilitates easier managerial oversight (Stone et al., 2010). For the three cases of the integrative partnerships, this is usually not optional and there is a legal mandate of such practices to ensure government representation and public oversight over the partnership nonprofits. For example, one formal agreement of the partnerships clearly states how government officials should be represented on the nonprofit board.

Conservancy by-laws shall provide for the appointment of various ex-officio members to its board of directors as well as the appointment of certain other directors as well as for the appointment of certain other directors by the Mayor. In particular, the appointment of at least 5 board members shall be the power of the Mayor with the confirmation of City Council. In addition, ex officio members of the board shall include the Mayor, the Director of the City’s Department of Parks and Recreation, the Director of the Department of Public Works and the Director of City Planning.

**Proposition 3-1:** Integrative partnerships are more likely to have a legal mandate of public oversight and government representation on the board of the partner nonprofit organizations.
Governance of Partnerships as Formal Agreements

Establishing a formal agreement is another major mechanism of how these partnerships are governed. Although a contract or formal agreement is optional for a public-private partnership (Peters, 1998), it does provide clarity and formality to the partnerships. 5 out of the 10 partnerships rely on a formal agreement or MOU to govern the interactions between governments and nonprofit organizations. For partnerships that do not have a formal agreement, the predominant reason is that the relationship is very stable and has worked well. There is no reason for an agreement until something goes wrong. All the integrative partnerships rely on a formal agreement. When talking about the most important thing about managing the collaborative relationship, one nonprofit manager stated that:

A clear agreement that clearly states authority and responsibility is the most important thing. You need to be clear about who is responsible and the resources they have for that responsibility. Something is going to change. Personal relationships may and will fall apart. You must have very clear accountability mechanisms built in the partnership.

Corresponding well to this comments, one nonprofit manager in a partnership that does not have a formal agreement with the city stated the disadvantages of relying on the intentions of public officials and political leaders.

Current Mayor really sees our value. However, the past Mayor may not. There can be tensions depending on who is in charge politically. We do not care who takes charge politically as long as they love parks. When they do not value what we do, it is difficult to do what we do. We do not have the support from the city. We had a previous park director that did not really care about parks. It makes my job tougher.

When comparing the agreements reached by integrative partnerships with the other two types of partnerships, one clear distinction stands out. Philanthropic and coproductive partnerships
emphasize more on the responsibilities of the partner nonprofits and the provisions of risk management and insurances. It serves as a major mechanism for governments to make sure that nonprofit does not do things wrong. One public official stated that: “The major challenge of relying on nonprofits is insurance and liability. The formal agreement is set up to address these issues.”

For the integrative partnerships, although the risk management and liability provisions are an important part of the agreement, the agreement is more about specifying the roles, rights, and responsibilities of each party in the partnership. With these clearly defined boundaries (Ostrom, 2005), partners are less likely to have role ambiguities. In addition, there are also provisions in the agreement that constrain both governments and nonprofits. For example, the agreement of one integrative partnership clearly stated that: “the conservancy, preservation, and maintenance of the Property will be done only in accordance with the Master Plan.” It is made clear that the master plan is the boss, instead of the public or nonprofit manager. This provision creates incentives for the nonprofit partner to continue investing in public parks without the worry of governments overturning their projects. The agreement is a result of negotiations between two equals.

**Proposition 3-2:** Integrative partnerships are more likely to rely on formal agreements to structure the interactions of partners, which clearly states the rights and responsibilities of each partner, and include provisions at the constitutional level that govern both parties.
Governance of Partnerships as Building Relationships

Although a clearly stated and thoughtfully developed formal agreement plays an instrumental role in governing collaborative relationships, public and nonprofit managers also realize that a formal agreement cannot solve every problem and it is sometimes unnecessary. A good relationship with the partner will create clearer mutual expectations, therefore creating a common vision and reducing transactions costs in the collaborative endeavor. One public official described why communication and building relationships are important for managing the partnership:

The MOU is very direct and clear. However, the real works happen between the lines. I know their director’s number by heart and I can call her right now and say we need to this, can you help? I know that she will say yes if she can. The MOU will draw hard lines and govern what it is. The gray areas are much more important than the black and white ones.

When talking about how to build relationships with government officials, one interviewee listed the importance of common exposure through which public and nonprofit managers can spend extensive time together and jointly envision the possibility of the partnerships (before the partnership took shape, public officials and nonprofit managers went out for field trip in the New York City together to learn from NYC’s park management experiences). In addition to common exposure, one nonprofit manager also stated the importance of a constructive mindset in building successful collaborative relationships:

It is important to understand that while fundraising is the primary goal. There are many ways that the foundation can be helpful to the government department. Getting close enough to them to figure those out is very helpful in building the relationship. It is important to have the bigger picture in line instead of sticking to this is what I do and this is what you do. I can help the county government do their job if I can do it in a helpful way. It is helpful to have people in this organization that has experiences with the government and know what their constraints are. You must understand that to work with them successfully.
These quotes suggest that personal level interactions and relationship building must go hand in hand with those formal rules on the paper. It creates trust and more fluid communication channels between the partners. This is especially true when there is no formal agreement to rely on. All the partnerships that do not have a formal partnership agreement listed communication and a good relationship with the partner as the most important thing in managing the collaborative relationship. One nonprofit manager explained:

You must build a good relationship with the park manager. They will be your representatives downtown. It is important to have a strong relationship with the park manager because they are usually supporting the park unit, instead of the downtown parks department. If the relationship is not good, more efforts need to spent on persuasion, instead of actual programs. You do not have much control over who is in the administration. So your next best thing is the personal relationship, which is one on one. You are more likely to get support if you talk to and look at them. Get to know who you are dealing with and look for common ground.”

**Proposition 3-3:** Integrative partnerships are more likely to rely on both formal structures and personal relationships for the governance of the partnership, while philanthropic and coproductive partnerships tend to extensively rely on personal relationships.

**Governance of Partnerships as Building Leadership Capacity**

The fourth governance mechanism standing out in the interviews is building leadership capacity, especially on the nonprofit side. Nonprofit partners are expected to signal to the public and local governments that they have the capacity and commitment to fulfill their promises. This is especially true for integrative public-nonprofit partners as governments are expected to involve
nonprofits in some of the core parts of public service provision, such as the planning and management of public services. Because of the constraints local governments face, public managers do not often have the resources and attentions devoted to the partnerships. If nonprofits can take the initiative and demonstrate to the governments that they are capable and committed to the improvement of the public services instead of their own organizational benefits, local governments are more likely to put trust in nonprofits and share more responsibilities with them. One nonprofit leader articulates the reasons why the governance of collaboration comes in the form of building leadership and driving the direction of the partnership:

The city has a much broader agenda. If you are the mayor, you have to worry about the police, the fire, taxes, companies moving in and moving out, and everything. So, to get the attention of governments, have them know what you are doing, and give their blessing, is sometimes challenging. It is not even the problem that they are hostile to or against it, it is just hard to get their attention. Then, another problem is that the way our city is organized is in the separation of governments, makes it harder than other places because you cannot just talk to the parks department. You have to talk to the department of public works, and the parks department, the city planning department, and the city has a sustainability coordinator. It has a lot of touch points, which consumes resources and makes it challenging to coordinate. We have tried very hard to go through all these touch points. This is a big challenge for us.

By the same token, because there is not a strong parks director in the governmental structure, this gives us the opportunity to become a thought leader. Who else will coordinate all these? If you are the director of the Department of Public Works, no matter how much you love parks, you still have to think first about the road maintenance, snow removal, and all these other things.

On the other hand, stronger leadership capacity presented by nonprofit organizations would also generate more public trust for the partnerships, therefore sustaining the operation of the partnerships. When being asked about how the nonprofit would be able to fight back if one
member of the city council does not follow the partnership agreement, one nonprofit manager responded:

The agreement has the tool to do it. However, more important than that, we do a better job than Metro Parks. It is our delivery of service standards that are so high, that if someone wants to blow it up, the public would probably rise and revolt. This agreement rotates automatically unless a member of the city council has a question about the agreement. We are on our second 5 years. We are the gift that they can get credit for without spending a lot on. We are taking responsibilities, and smart politicians are going to like us.

We have a very robust financial backing, through revenue generation, endowment, and annual fund. We secured the confidence of our public partner when we were able to raise 13 million for capital projects by ourselves. There is a level of credibility and business planning built into it.

Because of the newness of involving nonprofits in the management and maintenance of public parks, it requires a leap of faith and deeper commitment from the public sector to move the partnership to the next level. On the other hand, it also requires the nonprofit to have the confidence that they can deliver the promises if they take on more tasks. Building stronger leadership capacity therefore stands out as a key mechanism of governance of collaborations, especially for integrative partners which “demand more managerial and leadership effort, and, therefore, entail a much deeper commitment” (Austin, et al., 2012, p.743). Stone et al. (2010, p.315) also found that strong informal leadership is very important for the success of public-nonprofit partnerships since “collaboration participants cannot rely on easily enforced, centralized direction or persons in positional authority roles.”
Proposition 3-4: Integrative partnerships are more likely to involve nonprofit partners that have strong leadership capacities.

Implications, Limitations, and Future Research

This study identifies the governance mechanisms of public-nonprofit partnerships and how they are linked to different stages of the collaboration continuum. It addresses the knowledge gap about how multi-sectoral partnerships are governed (Stone, et al., 2010) and insufficient attention to different forms of nonprofit collaboration (Gazley & Guo, 2015, p.25). In the context of public-nonprofit partnerships for public parks, the findings of this paper “supports a narrative of growing nonprofit power and reduced government control” (Fyall, 2016 p.947). Nonprofit organizations have great potential and are playing more and more important roles in public service provision through these partnerships. However, as recognized by both existing research and the interviewees, it does not necessarily mean that every successful partnership must move from the philanthropic stage to the integrative stage. One nonprofit manager said it best.

The ultimate democratic delivery of the public service is a great park. I see so many park systems that lose track of that in the name of certifications or I need to have this amount of public inputs. You can see people losing track. But there are great public systems out there, such as Minneapolis, Seattle, and Portland. And there are bad private ones. Just going private will not guarantee that you can be successful. There is no silver bullet. I am agnostic on the operational model. If there is a great public sector, go to the public-sector rout. You have to find the model that meet the resources and competence that are unique to each community. I am not for duplicating an operational model at the national level. You cannot. You will never see us jump into another city to say be us and do us! Every situation is unique… There is a continuum of park services from public to private. You need to find your place in the continuum that makes sense to you. But you have to be intentional about it. You cannot just be accidental. You have to think your way through.
Four governance mechanisms are identified in this study: government representation on the nonprofit board, establishing formal agreements, building relationships, and building leadership capacity. It resonates with existing literature’s emphasis on the structures, processes, and rules for the governance of collaboration (Vangen et al., 2015; Stone, et al., 2010; Ostrom, 2005). This study also specifies the linkage between these governance mechanisms and different stages of the collaborative relationships. Integrative partnerships are more likely to be developed when 1) there is a legal mandate for government representation on the nonprofit board; 2) partners rely on formal agreements that structure multiple levels of interactions among partners; 3) partners do not exclusively rely on good personal relationships; and 4) the partnership involves a nonprofit partner with strong leadership capacities.

There are some limitations of the paper that must be noted. First, although the author has made a conscientious effort to reach out to both public and nonprofit managers, there are more nonprofit managers who accepted the study invitations. Therefore, the conclusion of this paper may be biased towards the perspective of nonprofit managers. Further research could be conducted to represented more balanced responses of public and nonprofit managers, and compare these responses. The second limitation is the uniqueness of the parks and recreation context. The propositions of this study should be validated by qualitative research in other public service subsectors and larger N survey research. In addition to parks and recreation services, similar public-nonprofit partnerships have been set up in education, public libraries, art, and public safety. It will be great to see whether these governance mechanisms play out differently in these sub-sectors and there are additional governance mechanisms to manage these partnerships.
Fundamentally, being successful in managing and governing partnerships requires an open mind and continuous learning. This trend of public-nonprofit partnerships for public service provision has important implications for local government management and urban governance. There is so much to be explored and learned as we enter the age of collaboration and partnerships. One of the interviewees who had rich experiences in managing public parks thus concluded with the following quote:

I do not think there is a more interesting time working in parks than now because of all these operational models and neat approaches that we have at our disposal. 30 years ago, it was all public and you were locked in. Now we are figuring out how to make these public-private partnerships work in a way that people never thought this could be possible. It is really interesting to see how this has evolved… I did not study anything about it in my college twenty years ago. But in my career this is what defines my career: the ability to develop, define, and create partnerships and execute them.
CONCLUSION

This dissertation uses multiple qualitative and quantitative methods to examine the process and consequences of nonprofits becoming important players in determining and supporting government service provision, especially when there is a reverse funding flow from nonprofits to governments. The dominant approach to the study of government-nonprofit relationships focuses on the contracting regime in which the role of nonprofits is limited to the delivery and production of public services. Increasingly, however, local governments are relying on nonprofit organizations for the provision and financing of public services. The form of nonprofit support for public services is moving from co-production to co-governance. This offers great opportunities as well as challenges to public and nonprofit managers to fully unleash the value of nonprofit organizations in public service provision. This dissertation contributes to the understanding of this increasingly important phenomenon and theory development of government-nonprofit relationships.

The overarching hypothesis of this dissertation is that government-nonprofit relationships will show different patterns when there is a reverse funding flow from nonprofits to governments. The statistical analysis of the two quantitative chapters supports this hypothesis. In the context of local parks and recreation services in large U.S. cities, when park-supporting nonprofits spend more on local parks and recreation services, governments are likely to spend less on parks. Park-
supporting nonprofits are more likely to get involved in the public park master plan process, or co-governance, when local governments have a lower capacity in providing parks and recreation services. These results challenge the conventional wisdom developed from the subsector of social and human services in which nonprofits rely on local governments for funding.

Findings from the qualitative chapter suggest several mechanisms that these public-nonprofit partnerships can be governed and how these governance mechanisms are linked to the stages of the collaborative relationships. To fully unleash the value and power of nonprofit organizations, local governments need to delegate more power to nonprofit organizations. These governance mechanisms are helpful for public and nonprofit managers to better create, design, plan, and implement such partnerships. The interaction between formal and informal governance mechanisms seems to be a key in understanding the evolution of these partnerships.

Combining quantitative and qualitative evidence, this dissertation provides useful theoretical frameworks and new data for the understanding of government-supporting nonprofits and their relationships with local governments. Informed by the literature of government-nonprofit relationships, polycentric governance, coproduction, and cross-sectoral collaboration, this dissertation brings all these different theoretical perspectives together and offers a comprehensive analysis of how government-supporting nonprofits may influence the behaviors of local government and how they are involved in the co-governance of public services. As local
governments suffer from resource constraints and extensively use collaborative approaches to solve public problems, this research topic deserves more scholarly attention and represents a particularly promising line of future research in public and nonprofit management. The next section offers suggestions for future research that may advance our understanding of this important topic and contribute to public management scholarship.

**Future Research**

Since the limitations and future research directions for each paper have been extensively discussed in the previous chapters, I will focus this section on the research directions that can move the whole conversation forward and get this line of scholarship situated in some of the key questions in public and nonprofit management.

The first promising line of future research is about the performance implications of public-nonprofit partnerships and charitable support for public services. Does charitable support lead to better public service outcomes? Findings of this dissertation provide alternative hypotheses for this research question. On the one hand, local governments may free-ride and divert public resources for other uses when nonprofits are involved in supporting and financing public services. Because of the possibility of philanthropic failure, this may put the stability and quality of corresponding public services in jeopardy. On the other hand, government-supporting nonprofits may cultivate a higher level of community engagement and coproduction of public services,
therefore improving the quality and cost-effectiveness of public services. Future research should
gather new data and use appropriate empirical approaches to test these theoretical hypotheses
and address the performance implications of the charitable support for public services.

From a theoretical point of view, complex public funding structures of public services,
complicated by nonprofit support for public services, present unique opportunities for theoretical
development and testing in the literature of polycentric governance. The concept of polycentric
governance is coined by Ostrom, Tiebout, and Warren, (1961) to examine the consequences of
government fragmentation in U.S. metropolitan areas (McGinnis, 2016). The concept can be
defined as a structural feature of social systems of decision centers having limited and
autonomous prerogatives and operating under an overarching set of rules (Ostrom, 1972). The
U.S. urban park systems can be characterized as a polycentric governance system: city parks are
governed and funded by multiple, independent, yet overlapping jurisdictions and public/private
actors. Urban parks located within the city boundaries can be funded and managed by the federal
government, state government, city government, county government, special park district, or
some park-supporting nonprofit organizations. Future research can build on the data and
empirical evidence presented in this dissertation, and address the broader question of the
consequences of a more polycentric public service provision system.
Another fruitful direction for future research is about the social and environmental justice implications of charitable support for public services. Do public-nonprofit partnerships challenge the “publicness” of public services? Who really benefits from these partnerships? How is urban governance transformed by the involvement of non-state actors in the arena where local governments traditionally play a dominant role in determining and financing public services? Given extensive evidence that racial minorities and socially disadvantaged groups do not have the same level of access to public services as other social groups do, it will be important to understand whether charitable support for public services and public-nonprofit partnerships alleviate or exacerbate such disparities. It will also be useful to examine the emergence and consequences of community initiatives that are set up to ensure a more equitable distribution of public services. For example, the New York City has set up the Community Parks Initiative to improve local parks that are located in densely populated neighborhoods and have not been supported by significant capital investment in the last decade. Who are making the decisions in these initiatives? What criteria are used in the decision-making process? What roles do citizens, businesses, and nonprofits play in these city-wide initiatives? Do these initiatives really change the allocation of capital projects in the neighborhoods? Both in-depth qualitative research and quantitative spatial analysis with geographic information system (GIS) will provide insights into these important questions.
Policy and Management Implications

The main argument of the dissertation is that nonprofits can become important actors in supporting and financing public services. Findings support this argument by pointing out how nonprofits’ involvement in public service provision influences local governments’ budgetary decisions and how nonprofits shape the planning and design of public services. The prevalence of public-nonprofit partnerships and the rapid growth of charitable support for public services provide new opportunities as well as challenges for public and nonprofit managers.

For public managers, it is important to have an open mind of the opportunities and resources nonprofits may bring to the table, even for public services that are traditionally financed and managed by local governments. This research suggests that public managers are very active and entrepreneurial in terms of attracting community and philanthropic support for public services, and this trend is robustly growing. The ability to discover, create, and implement partnerships has become an essential skill for public managers. By unpacking the black box of this emerging phenomenon, this research aims at stimulating further discussions about the distribution and performance consequences of these efforts. Government-supporting nonprofits represent an institutional innovation for public managers to engage the local community and stimulate the coproduction of public services. Public managers who get the most from partnerships learn with their partners, design proper institutional support for collaboration, and stick to their core responsibilities of providing high-quality public services.
For nonprofit managers, the important lesson is that they have to develop their leadership capacities in partnerships and they cannot wait for local governments to get everything ready.

The value of nonprofits in public service provision is maximized when nonprofits lead, coordinate and actively participate in different phases of public service provision. It is also important for nonprofit organizations to realize the “publicness” of public services and the constraints associated with it. It is challenging to operate in a space which citizens and donors regard as a typical government function. Government-supporting nonprofits should therefore not define and limit their roles as a pure fundraising arm of local governments. Clear organizational identity for nonprofit organizations is essential for their success in this emerging field.

For park professionals and park managers, they are facing an exciting but challenging time. On the one hand, there is unprecedented demand for urban green spaces and public spaces because of rapid urbanization, which represents opportunities for extensive development of this profession. On the other hand, the nature of public parks services is changing and it is no longer sufficient to rely on old tools and ideas for planning, managing, and financing parks. Those diverse operational models for public park management only make sense when park managers can fully assess the conditions, benefits, and costs of each model. For example, findings of this dissertation suggest that charitable support for public services may come at the expense of reduced public funding for parks and recreation services. Successful park managers bring people
together and create platforms for citizens from different sectors to co-create parks and recreation services that benefit the whole community.

This dissertation contributes to public management scholarship by presenting new theories and evidence of nonprofit support for public services. It challenges the assumptions of existing research on government-nonprofit relationships, and aims to open a window for future research that contributes to both the theory and practice of public and nonprofit management. The increase in permanent, organized government-supporting charitable institutions challenges traditional notions that this funding is incidental and unimportant to the quality and distribution of public service provision, and suggests that public managers need to manage and adapt to this new level of engagement of nonprofit organizations to ensure the quality of public services.
REFERENCES


APPENDIX: INFORMED CONSENT STATEMENT

Study #1703714120

INDIANA UNIVERSITY – BLOOMINGTON
INFORMED CONSENT STATEMENT

A Comparative Case Study of Local Government-Nonprofit Partnerships for Parks

You are invited to participate in a research study of local government-nonprofit partnerships for city parks. You were selected as a possible subject because you are a public or nonprofit manager who takes key leadership roles in the parks department or a park-supporting nonprofit organization. Please read this form and ask any question you may have before agreeing to be in the study.

The study is being conducted by Indiana University Ph.D. candidate Daniel Cheng, with the support and supervision of SPEA-IUB Professor Beth Gazley.

STUDY PURPOSE:
The purpose of this study is to understand why different forms of government-nonprofit partnerships emerge, how they are governed in different ways, and how they are linked to the performance of city park systems. This is a new but important area of research in public and nonprofit management, and the results will be of interest to both scholars, citizens, nonprofit managers, and government officials.

NUMBER OF PEOPLE TAKING PART IN THE STUDY
You are part of a small group (15-20) of participants who will be interviewed in the region of the Ohio River Basin. The Ohio River Basin is selected because major cities in this region are usually regarded as peer cities in terms of their social and economic development. However, the characteristics of their park systems and the forms of their government-nonprofit partnerships for parks vary significantly. Interviewees include both public and nonprofit managers. You will be interviewed in person or by telephone for approximately 30 minutes to one hour. A brief follow-up by telephone or email to clarify meaning may be possible.

RISKS OF TAKING PART IN THE STUDY
While on the study, the risks are:
   A risk of feeling uncomfortable in the semi-structured interview.
   A risk of possible loss of confidentiality.
   A risk of reliving a past conflict.
   A risk of pressure to alter responses because of social pressures or the requirement of your current position.
While participating in the individual interview, you can tell the researcher that you feel uncomfortable and do not want to answer a particular question.

**BENEFITS OF TAKING PART IN THE STUDY**

The benefits of participation that are reasonable to expect are being fundamental to the development of new knowledge about how government-nonprofit partnerships are managed and governed, especially among their peer cities. The participant will also have free access to a free executive summary of the results.

**CONFIDENTIALITY:**
Your interview will be audiotaped. The interviews are confidential. Audiotapes will be destroyed once they have been transcribed, and transcriptions will be edited to delete all personal data and identifying information. Only the city of origin will be kept and used internally to allow interviews from the same city to be matched and compared. These findings may be published. No participant will be identified in any publication.

**PAYMENT**
You will not receive payment for taking part in this study.

**CONTACT:**
If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study) you may contact the researcher, Daniel Cheng, at Indiana University at 317-252-3347 and chengyua@indiana.edu. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the Indiana University Human Subjects Office at 812-856-4242 or by email at IRB@IU.edu and reference IRB Protocol #1703714120.

**PARTICIPATION:**
Your participation in this study is voluntary; you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed.

I have read this form and received a copy of it. I have had all my questions answered to my satisfaction. I agree to take part in this study.

Subject’s signature___________________________________ Date _________________
APPENDIX: INTERVIEW DISCUSSION GUIDE

Interview Protocol for in-person and telephone interviews:

Note: the following is indicative of the questions that will be asked of interview participants. It will give you a good idea of the scope and focus of the interview in terms of information that will be sought. However, the exact wording of questions will be guided by the individual circumstances of each interview.

I am now going to turn on the tape recorder….

Option A or B:
(A). We are in the city of _____, speaking with ____________(Name/Title)
(B). I am speaking by phone with ____________________ (Name/Title) of _____ (City Name)

Mr./Ms. ____________. Thanks again for agreeing to participate in this interview.

(A) Here is an “Informed Consent Statement” that you can keep and
(B) You have already received an informed consent statement

that describes the purpose of this study, how information will be used, your rights as a participant, and how I can be contacted. Let me know at any time if you would like more information about the study and its outcomes.

[For those interviewees with an active government-nonprofit partnership – Indianapolis, Louisville, Pittsburgh, Cincinnati, Nashville]:

1. Can you talk about how governments and nonprofits develop into this partnership and how this partnership evolves over time? What are some of the benefits and costs you have experienced in this partnership? Is there any benefit or cost/challenge that you did not expect when entering this partnership?

2. What role does the parks department/nonprofit play in this partnership? Based on your experiences, is it the city or the nonprofit that takes the leadership role in this partnership? Through which mechanisms do the parks department and the nonprofit figure out their roles (e.g. formal agreement, informal dialogues, or one party divides the responsibilities)?

3. In addition to the parks department and the nonprofit, are there other partner organizations involved in the partnership? Is any higher level public official (e.g. mayor/city manager/city council members) involved in the partnership? What roles are they playing?

4. Is there a formal agreement signed between XX nonprofit and the city parks department?
[if yes] What is that agreement mainly about? How was this agreement drafted? How do you make sure that both parties follow the terms of the agreement? Who monitors the process? What are the consequences of not following the terms of the agreement?

[if no] Why not? How do you make sure that each party would fulfill their expected responsibilities? How were these informal rules or agreements? Do you see the need for a formal agreement for the partnership to go forward?

5. How often do you meet the staffs or directors of XX nonprofit/city parks director? Is this usually a formal or informal meeting? What are those meetings usually about? Are these meetings more focused on specific issues or symbolic?

6. [If government] Do you sit on the board or advisory council of XX nonprofit? If so, what role do you play on the board? If not, why not? Is that because they did not invite you or you did not want to serve on the board? What do you think are the risks and benefits of sitting on the board of the nonprofits?

[If nonprofit] Does the parks director sit on the board or advisory council of XX nonprofit? If so, what roles are they filling? If not, why not? What do you think are the risks and benefits of inviting city parks director to sit on the board of the nonprofits?

7. In the last few years, have you encountered situations in which you have to turn down a nonprofit/the city’s request in park programming or planning, or any conflict with the parks department/nonprofit? If so, can you briefly describe the incident? How did you finally reach the agreement?

8. [If government] In the city council/park board meeting, have you ever encountered challenges of cutting parks spending or other issues because of the resources nonprofit bring to the table? How did you address such challenges?

[If nonprofit] In the board meeting or meeting with the donors, have you ever encountered challenges of reducing donations because of the partnership with city government? How did you address such challenges and concerns of the donors?

9. What would you want others to know about how these intersectoral partnerships work or don’t work? Reflecting on this partnership, what lessons would you want to pass along to other public and nonprofit managers? Of the following factors, which is the most important barrier or concern for you in developing such a partnership: resource insufficiency, equity (partnerships are more likely to be developed in richer areas), accountability (which parties are responsible for the performance of the partnerships), effectiveness (measuring how effective those partnerships truly are), power imbalances (governments and nonprofits are in different power positions in the partnership), or something else? Can you elaborate?
10. Among your peer cities, many of them have developed active government-nonprofit partnerships for parks. Are you aware of any of these partnerships? Which city do you think has developed the best public-nonprofit partnerships for parks? What is the most important thing you want to learn from them?

[For those interviewees without an active government-nonprofit partnership – Columbus]:

1. According to the information I have accessed through online research, it seems like your city has not developed a partnership with nonprofits for city parks. Am I correct? Were you in such partnerships before?

2. [If no] Why do you think that the local government and nonprofit organizations do not partner in your community? What factors contribute to there being no such government-nonprofit partnerships in your community? Have you received any active request from citizens or nonprofits to develop such partnerships? If so, why did you decline the request? [Probe if necessary with a check-list of possible/likely factors].

3. [If yes] What caused this partnership to end? [Probe if necessary:] Were your goals achieved? If not, what happened and why do you think it happened the way it did?

4. What are some of the mechanisms for your department to gather citizen input and raise private support for parks?

5. Given the current situation of your city parks system, is the parks department actively seeking such partnerships with nonprofits? If so, what are the opportunities and challenges you have observed in the process? Of the following factors, which is the most important barrier or concern for you in developing such a partnership: resource insufficiency, equity (partnerships are more likely to be developed in richer areas), accountability (which parties are responsible for the performance of the partnerships), effectiveness (measuring how effective those partnerships truly are), power imbalances (governments and nonprofits are in different power positions in the partnership), or something else? Can you elaborate?

6. Among your peer cities, many of them have developed active government-nonprofit partnerships for parks. Are you aware of any of these partnerships? Which city do you think has developed the best public-nonprofit partnerships for parks? What is the most important thing you want to learn from them?
APPENDIX: EMAIL INVITATION

Email Invitation (First Round):

Dear Mr./Ms. * *:

You are invited to participate in a research study of local government-nonprofit partnerships for city parks. The purpose of this study is to understand why different forms of government-nonprofit partnerships emerge and how they are governed and managed. This is a new but important area of research in public and nonprofit management, and the results will be of interest to scholars, citizens, nonprofit managers, and government officials like yourself.

You were selected for this interview as part of a small group (20-25) of participants, who takes leadership roles in managing government-nonprofit partnerships in major cities of the Ohio River Basin region. Your participation is therefore very important to our ability to achieve a comprehensive understanding of how such partnerships are governed and managed. By participating in this study, you will not only contribute to the common knowledge of this important topic, but also gain knowledge about how your peer cities are doing in managing these public-nonprofit partnerships.

The interview will take 30 to 60 minutes to complete. Interview questions range from the general assessment of the partnership to the specific role you play and the challenges you have encountered in the partnership. The attached informed consent statement contains more detailed information about the risks, benefits, and procedures of this study. If you have any question or concern, please call me at 317-252-3347 or email me at chengyua@indiana.edu.

If you are willing to accept this interview invitation and participate in this study, I would like to identify a date and time in the next two weeks to carry out the interview. I can conduct the interview in person or through the phone per your convenience. Thank you for your consideration and I look forward to hearing from you.

Sincerely,

Daniel Cheng
School ofPublic and Environmental Affairs at Indiana University Bloomington
Email Invitation (Second Round):

Dear Mr./Ms. *

I am writing to follow up on a previous email sent to you [last week/recently] in which you were invited to participate in a study about local government-nonprofit partnerships for parks. Just to refresh your memory, I conduct research on government-nonprofit partnerships for parks. You were selected for this interview for important representational reasons and you are part of a small group (20-25) of participants. Your participation is therefore very important to our ability to achieve a comprehensive understanding of how such partnerships are governed and managed.

I am hoping that you can spare 30 to 60 minutes of your time for an interview at your office or on the phone during the coming month, to talk about government-nonprofit partnerships in your community. By participating in this study, you will not only contribute to the common knowledge of this important topic, but also gain knowledge about how your peer cities are doing to manage these public-nonprofit partnerships. As a thank you for participating in the study, I will send you a report. The attached informed consent statement contains more detailed information about the risks, benefits, and procedures of this study.

If you are willing to accept this interview invitation and participate in this study, I would like to identify a date and time in the next two weeks to carry out the interview. I can conduct the interview in person or through the phone per your convenience. Thank you for your consideration and I look forward to hearing from you.

Sincerely,

Daniel Cheng
School of Public and Environmental Affairs at Indiana University-Bloomington
APPENDIX: PHONE SCRIPT

Phone Script for Follow-up to Initial Letter and Scheduling of Interviews

“Hello, Mr./Ms. __________________. My name is Daniel Cheng from Indiana University. I am calling to follow up on a letter sent to you [last week/recently] in which you were invited to participate in a study about local government-nonprofit partnerships for parks.”

“Just to refresh your memory, I conducted research on government-nonprofit partnerships for parks. I am now interviewing a small group of public [nonprofit] managers in major cities in the Ohio River Basin region to examine why different forms of government-nonprofit partnerships emerge, how they are governed in different ways. I am hoping that you can spare one hour of your time for an interview at your office during the coming month, to talk about government-nonprofit partnerships in your community.”

[Participant accepts or declines invitation]

If a NO, “Thank you anyway for your time. Have a great day.”

If a YES, “That’s great. Thanks so much for your time. Would an interview on __________ work for you?” [Further unscripted conversation to schedule interviews will take place here]

“Before we meet, you may also wish to review the initial letter I sent you, in which I described your rights as a study participant and the uses to which the data will be put. I will also have a copy of that information with me when I arrive.”

“May I have your email address now so that I can confirm our appointment shortly in advance?”

“I look forward to meeting you. Thanks again for your time.”
APPENDIX: THANK-YOU LETTER

Letter #1

May 1, 2017

Dear ____________,

Thank you most sincerely for your participation in the Indiana University project on local government-nonprofit partnerships for parks. I enjoyed our interview at your offices (or on the phone) very much, and the project has benefited considerably from your participation. I know how busy you are and thus am doubly grateful for your time and interest.

As I mentioned, it will be some time before these findings make their way into print, but I will be sure to notify you when they do.

With my deep appreciation,

Daniel Cheng
School of Public and Environmental Affairs
Indiana University Bloomington

Letter #2

May 1, 2017

Dear ____________,

Thank you most sincerely for your interest in participating in the Indiana University project on local government-nonprofit partnerships for parks. I am sorry our conflicting schedules did not permit me to visit your offices for an interview. There may be an opportunity for telephone interviews at some future time, so if you hear from me it will be for the purposes of setting up a time to interview you by phone about government-nonprofit partnerships in your community. I hope you will be able to oblige me. In the meantime, please accept my thanks for your time and interest, and my best wishes for a successful year.

With my deep appreciation,

Daniel Cheng
School of Public and Environmental Affairs
Indiana University Bloomington
Yuan (Daniel) Cheng
Email: chengyua@indiana.edu
Personal Website: http://yuandanielcheng.weebly.com/

EDUCATION

Ph.D. Public Affairs, Indiana University Bloomington, 2013 - 2017
Field: Nonprofit Management, Public Management, Environmental Policy
Committee: Beth Gazley (Chair), Daniel Cole, Burnell Fischer, Michael McGuire,
Chao Guo (University of Pennsylvania)

M.A. Philanthropic Studies, Indiana University–Purdue University Indianapolis, 2011 - 2013

B.S. Environmental Science, Zhejiang University, China, 2006 - 2010
Morningside Cultural China Scholars Program, Chu Kochen Honors College
Exchange Student, Ludwig-Maximilians-Universität München, 2008

ACADEMIC POSITIONS

Visiting Assistant Professor, Indiana University Bloomington, School of Public and
Environmental Affairs, August 2017 - present

RESEARCH

Publications:
Cheng, Y. “Nonprofit Spending and Government Provision of Public Services: Testing Theories
of Government-Nonprofit Relationships.” R&R status at Journal of Public
Administration Research and Theory.

Cheng, Y., Yang, L. “How do Nonprofits Respond to Government Budget Cuts? Evidence from
Local Parks and Recreation Services.” R&R status at Nonprofit and Voluntary Sector
Quarterly.

Gazley, B., Cheng, Y., and LaFontant, C. “Charitable Support for Public Parks and Recreation:
Trends and Taxonomies.” R&R status at Public Administration Review.

Working Papers:
Cheng, Y. “Exploring the Role of Nonprofits in Public Service Provision: Shifting from
Co-production to Co-governance.”

Cheng, Y. “Governing Public-Nonprofit Partnerships: Linking Governance Mechanisms to
Collaboration Stages.”

Evidence from Large U.S. City Park Systems.”
Farmer, J., **Cheng, Y.**, Dickinson, S., Robeson S., Reynolds, H., Fischer, B. “U.S. Municipal Park and Recreation Departments Ill-Prepared for Changing Climate While Adverse Events Spawn Adaptation.”

Gazley, B., **Cheng, Y.**, and LaFontant, C. “Private Provision of Public Services through the Lens of Social Justice: How Equitable Are They?”

**Funded Grants:**
“Does a Polycentric System of Governance Perform Better? Evidence from Large U.S. City Park Systems.” The Vincent and Elinor Ostrom Workshop at Indiana University Bloomington, Principal Investigator. 2017-2018
“Is Charitable Support for U.S. Public Parks Good Public Policy or a Philanthropic Failure?” Indiana University Lilly Family School of Philanthropy Research Fund, Co-Principal Investigator. 2016-2017

**Conference and Research Presentations:**
“U.S. Municipal Park and Recreation Departments Ill-Prepared for Changing Climate While Adverse Events Spawn Adaptation.” April 2017. Workshop on Adapting to Climate Change. Notre Dame, IN.

Additional Training:
AOM Public and Nonprofit Division Doctoral Student Professional Development Consortium, Atlanta, August 2017
ICPSR Summer Program in Quantitative Methods, University of Michigan, July 2016
Summer Institute for Qualitative and Multi-Method Research, Syracuse University, June 2015
PMRC Doctoral Student Professional Development Workshop, Minnesota, June 2015

Research Skills:
Multilevel analysis; causal inference; longitudinal data analysis; categorical data analysis; structural equation modeling; network analysis
Survey research methods and online questionnaire design
Qualitative analysis using Nvivo
Geographic information system
Institutional Analysis

TEACHING

Teaching Interests:
Nonprofit Management and Leadership, Cross-sectoral Collaboration, Community Organizing, Social Entrepreneurship, Local Public Management, Urban Sustainability

Teaching Experience:

HONORS and AWARDS

Ostrom Research Award, Indiana University Bloomington, 2017
Penn Summer Doctoral Fellowship, University of Pennsylvania, 2017
Pi Alpha Alpha Global Honor Society for Public Affairs and Administration, 2016
ARNOVA Doctoral Fellowship Award, 2016
ARNOVA Emerging Scholars Research Roundtable, 2016
Summer Fellowship for ICPSR Quantitative Methods Training, Indiana University, 2016
Institute for Humane Studies PhD Scholarship, George Mason University, 2015-2016
Summer Fellowship for IQMR Qualitative Methods Training, Indiana University, 2015
Best Paper Award in Nonprofit Management, SPEA Doctoral Student Conference, 2015
Adam Smith Fellowship, Mercatus Center, George Mason University, 2014-2015
Indiana State Resolution for Honoring China Philanthropy Leadership Initiative, 2014
The Vincent and Elinor Ostrom Workshop Fellowship, Indiana University Bloomington, 2013
Research Assistantship and Associated Instructorship, Indiana University, 2013-2017
Honor Cord Recipient, Indiana University Lilly Family School of Philanthropy, 2013
Junior Fellow at China Citizenship and Social Innovation Camp, Harvard University, 2012
Susana Chou Scholarship, Macau Tong Chai Charity Foundation, 2011-2015

RESEARCH AND PROFESSIONAL EXPERIENCE

Research Assistant, Professor James Farmer, 2016 to present
Research Assistant, Professor Beth Gazley, 2014 to present
Associate Instructor, Indiana University, 2015-2016
Research Associate, Lilly Family School of Philanthropy, 2013
Graduate Assistant, the Fundraising School, 2012-2013
President and Co-founder, China Philanthropy Leadership Initiative, 2011-2013
SEE Conservation and Global Village of Beijing Fellow for Rural Development, 2010-2011

SERVICE and PROFESSIONAL MEMBERSHIPS

Professional Service:
Discussant or Panel Chair: ARNOVA 2016
Committee for Online Course Development, Harvard SEED for Social Innovation
Board Member, Association of SPEA Ph.D. Students (ASPS), 2014 - 2015
Adviser, Chinese Nonprofit Study Association, 2013 - 2015

Professional Memberships:
Association for Research on Nonprofit Organizations and Voluntary Action
Public Management Research Association
Academy of Management
Association for Public Policy Analysis and Management
China-America Association for Public Affairs