Exploring the Role of Nonprofits in Public Service Provision:

Moving from Co-production to Co-governance

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Abstract:

This article investigates the determinants of nonprofits' involvement in co-governance, or the planning of public services, by utilizing a unique dataset of park-supporting nonprofit organizations in large U.S. cities. The results suggest that co-governance, although not as prevalent as co-production, is a distinct type of nonprofit support for public services. Nonprofits are more likely to get involved in co-governance when they are younger, and operate in communities which are resourceful, stable, and have weak government capacity in providing corresponding public services. The article points to an emerging mode of public-nonprofit collaboration that goes beyond the production and delivery of services. As public managers are facing extensive challenges in sustaining the desired level of public services on their own, these findings have important policy implications for efforts to promote citizen participation and cross-sector solutions to complex social problems.

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 and Lipsky 1993; Brandsen and Pestoff 2006).

Despite this surge of academic interest in government-nonprofit collaboration in public service provision (Gazley and 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 and Gazley 2014; Gazley, Cheng, and 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 and 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 coproductive 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 article 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 article 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 article 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 and Nishimura 2006; Osborne and 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 article 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 article offers a more nuanced understanding of government-nonprofit relationships and how these relationships may influence nonprofits' involvement in different phases of public service provision.

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 and 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 and Honingh 2016), the benefits are equally appealing. Coproduction is not resource-free (Bovaird and Loeffler 2012) and it may be better coordinated by formal organizations, such as neighborhood associations or charitable nonprofit organizations (Paarlberg and 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 an upsurge of scholarly interest in the role of the third sector in public service provision (Brandsen and 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, and Sicilia 2017; Verschuere, Brandsen, and Pestoff 2012). Despite some efforts in separating coproduction from co-provision (Ferris 1984), co-creation (Voorberg, Bekkers, and Tummers 2014), co-management (Brandsen and Pestoff 2006), and co-governance (Osborne and McLaughlin 2004), those terms are generally used interchangeably in the literature (Osborne and Strokosch 2013).

For the purpose of this article, 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 and 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 is presented to summarize the theoretical framework and corresponding hypotheses.

[Figure 1 Here]

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: 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 and Yoshioka 2016).

Hypothesis 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 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 and 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 and 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 and 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 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 and Zhang 2014; Mosley 2010; Child and Grønbjerg 2007). I use an organization's annual total expenditure to indicate the size of the organization in this article.

Hypothesis 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. Scholars have 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 and 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 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. 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, and 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 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 article 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 article 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 (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 and 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 and 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, and 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-assuming and costly process, with one master plan easily costing more than $ 200,000 (Harnik and 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 and table 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 1 and 2 Here]

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 3 presents the count of different types of supporting activities conducted by those park-

supporting nonprofits. According to table 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 and 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 3 Here]

The result of the exploratory factor analysis is presented in table 4. Activities that are bolded in a column indicates that the underlying factor captures most of the variance of the activity. According to table 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 4 Here]

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 and England 1983).

The results of the multilevel analysis are presented in table 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 and 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 5 Here]

The hypotheses about community's financial and human resources and community stability are supported by the analysis, while there is no statistically significant relationship between nonprofits' involvement in co-governance and the political ideology and social diversity 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, while community's financial and human resources a factor of 1.477. Above results indicate that nonprofits are more likely to be involved in co-governance when the community is stable and resourceful.

Hypothesis 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 and 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, there is no statistically significant relationship between nonprofits' involvement in co-governance and their reliance on donative income as well as organizational size. 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 a new role of nonprofits in public service provision: pushing the boundaries of the status quo and moving the support for public services beyond co-production to co-governance.

Discussion and Conclusion

This study seeks to build an understanding of nonprofit support for public services through the lens of co-production and co-governance. Through 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 article 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 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 younger, and operate in communities which are resourceful, stable, and have weak government capacity in

providing corresponding public services. Finally, this article 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 and 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.

References

Agranoff, Robert. 2012. *Collaborating to manage: A primer for the public sector*. Georgetown University Press.

Aligica, Paul Dragos, and Peter J. Boettke. 2009. *Challenging institutional analysis and development: The Bloomington school*. Routledge.

Bekkers, René, and Pamala Wiepking. 2011. A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving. *Nonprofit and Voluntary Sector Quarterly*, *40*(5), 924-973.

Brandsen, Taco, and Marlies Honingh. 2016. Distinguishing different types of coproduction: A conceptual analysis based on the classical definitions. *Public Administration Review*.

Brandsen, Taco, and Victor Pestoff. 2006. Co-production, the third sector and the delivery of public services: An introduction. *Public management review*, *8*(4), 493-501.

Bryson, John M., Barbara C. Crosby, and Melissa Middleton Stone. 2006. The design and implementation of cross-sector collaborations: propositions from the literature. *Public administration review*, *66*(s1), 44-55.

Bovaird, Tony, Gregg G. Van Ryzin, Elke Loeffler, and Salvador Parrado. 2015. Activating citizens to participate in collective co-production of public services. *Journal of Social Policy*, *44*(01), 1-23.

Brudney, Jeffrey L., and Robert E. England. 1983. Toward a definition of the coproduction concept. *Public Administration Review*, 59-65.

Child, Curtis D., and Kirsten A. Grønbjerg. 2007. Nonprofit advocacy organizations: Their characteristics and activities. *Social Science Quarterly*, *88*(1), 259-281.

Crompton, John L. 2008. Empirical evidence of the contributions of park and conservation lands to environmental sustainability: The key to repositioning the parks field. *World Leisure Journal*, *50*(3), 154-172.

Denhardt, Robert B., and Janet Vinzant Denhardt. 2000. The new public service: Serving rather than steering. *Public administration review*, *60*(6), 549-559.

Denhardt, Janet V., and Robert B. Denhardt. 2015. The new public service revisited. *Public Administration Review*, *75*(5), 664-672.

Ferris, James M. 1984. Coprovision: Citizen time and money donations in public service provision. *Public Administration Review*, 324-333.

Fischer, Robert L., Amanda Wilsker, and Dennis R. Young. 2011. Exploring the revenue mix of nonprofit organizations: Does it relate to publicness?. *Nonprofit and Voluntary Sector Quarterly*, 40(4), 662-681.

Foster, Mary K., and Agnes G. Meinhard. 2002. A regression model explaining predisposition to collaborate. *Nonprofit and Voluntary Sector Quarterly*, *31*(4), 549–564.

Fyall, Rachel. 2016. The power of nonprofits: mechanisms for nonprofit policy influence. *Public Administration Review* 76(6): 938-948.

Gazley, Beth. 2010. Why not partner with local government? Nonprofit managerial perceptions of collaborative disadvantage. *Nonprofit and Voluntary Sector Quarterly*, *39*(1), 51-76.

Gazley, Beth. 2008. Beyond the contract: The scope and nature of informal government–nonprofit partnerships. *Public administration review*, *68*(1), 141-154.

Gazley, Beth, Yuan Cheng, and Chantalle LaFontant. 2015. Coproduction of public services: Recent trends and taxonomy of philanthropic support for public parks and recreation. In *Association for Nonprofit and Voluntary Sector Annual Conference, Chicago, USA*.

Gazley, Beth, and Chao Guo. 2015. What do we know about nonprofit collaboration? A comprehensive systematic review of the literature. In *Academy of Management Proceedings*, vol. 2015, no. 1, p. 15409. Academy of Management.

Graddy, Elizabeth A., and Bin Chen. 2006. Influences on the size and scope of networks for social service delivery. *Journal of Public Administration Research and Theory*, *16*(4), 533-552.

Grønbjerg, Kirsten A., and Laurie Paarlberg. 2001. Community variations in the size and scope of the nonprofit sector: Theory and preliminary findings. *Nonprofit and Voluntary Sector Quarterly* 30 (4): 684-706.

Guo, Chao. 2007. When government becomes the principal philanthropist: The effects of public funding on patterns of nonprofit governance. *Public administration review*, *67*(3), 458-473.

Guo, Chao, and Gregory D. Saxton. 2014. Tweeting social change: How social media are changing nonprofit advocacy. *Nonprofit and Voluntary Sector Quarterly*, *43*(1), 57-79.

Guo, Chao., and Zhibin Zhang. 2014. Understanding nonprofit advocacy in non-western settings: A framework and empirical evidence from Singapore. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *25*(5), 1151-1174.

Hansmann, Henry. 1987. Economic theories of nonprofit organizations. *The nonprofit sector: research handbook*, 27-42.

Harnik, Peter. and Abby Martin. 2015. *Public spaces/private money: the triumphs and pitfalls of urban park conservancies.* The Trust for Public Land.

Kettl, Donald F. 2002. Managing indirect government. *The tools of government: A guide to the new governance*, 490-510.

Klijn, Eric H. 2012. New public management and governance: A comparison. *Oxford Handbook of Governance*, 201-214.

Lecy, Jesse D., and David M. Van Slyke. 2013. Nonprofit sector growth and density: testing theories of government support. *Journal of Public Administration Research and Theory* 23(1): 189-214.

Lincoln Institute of Land Policy. (2017). *Fiscally Standardized Cities database.* http://www.lincolninst.edu/subcenters/fiscally-standardized-cities/. Accessed on: June 17, 2017.

Malatesta, Deanna, and Craig R. Smith. 2014. Lessons from resource dependence theory for contemporary public and nonprofit management. *Public Administration Review*, *74*(1), 14-25.

Mosley, Jennifer E. 2010. Organizational resources and environmental incentives: Understanding the policy advocacy involvement of human service nonprofits. *Social Service Review*, *84*(1), 57-76.

Mosley, Jennifer E. 2012. Keeping the lights on: How government funding concerns drive the advocacy agendas of nonprofit homeless service providers. *Journal of Public Administration Research and Theory*, *22*(4), 841-866.

Nabatchi, Tina, Alessandro Sancino, and Mariafrancesca Sicilia. 2017. Varieties of Participation in Public Services: The Who, When, and What of Coproduction. *Public Administration Review*.

Nelson, Ashlyn and Beth Gazley. 2014. The rise of school-supporting nonprofits. *Education Finance and Policy* 9(4): 541-566.

Osborne, Stephen P., and Kate McLaughlin. 2004. The cross-cutting review of the voluntary sector: where next for local government–voluntary sector relationships?. *Regional studies*, *38*(5), 571-580.

Osborne, Stephen P., and Kirsty Strokosch. 2013. It takes two to tango? understanding the Co-production of public services by integrating the services management and public administration perspectives. *British Journal of Management*, *24*(S1), S31-S47.

Ostrom, Vincent., and Elinor Ostrom. 1977. Public goods and public choices. *1977*, 7-49.

O'Toole Jr, Laurence J. 1997. Treating networks seriously: Practical and research-based agendas in public administration. *Public Administration Review*: 45-52.

Paarlberg, Laurie E., and Sheldon Gen. 2009. Exploring the determinants of nonprofit coproduction of public service delivery: The case of K-12 public education. *The American Review of Public Administration*, *39*(4), 391-408.

Paarlberg, Laurie E., and Takayuki Yoshioka. 2016. The impact of local economic structure on community philanthropy. *Public Administration Review* 76(2): 340–350.

Parks, Roger B., Paula C. Baker, Larry Kiser, Ronald Oakerson, Elinor Ostrom, Vincent Ostrom, Stephen L. Percy, Martha B. Vandivort, Gordon P. Whitaker, and Rick Wilson. 1981. Consumers as coproducers of public services: Some economic and institutional considerations. *Policy Studies Journal*, *9*(7), 1001-1011.

Pincetl, Stephanie. 2003. Nonprofits and park provision in Los Angeles: An exploration of the rise of governance approaches to the provision of local services. *Social Science Quarterly*, *84*(4), 979-1001.

Salamon, Lester M. 1987. Of Market Failure, Voluntary Failure, and Third-Party Government: Toward a Theory of Government-Nonprofit Relations in the Modern Welfare State. *Nonprofit and Voluntary Sector Quarterly*, 16(1):29-49.

Salamon, Lester M. (Ed.). 2002. *The tools of government: A guide to the new governance*. Oxford University Press.

Skidmore, Mark, and Eric Scorsone. 2011. Causes and consequences of fiscal stress in Michigan cities. *Regional Science and Urban Economics* 41(4): 360-371.

Smith, Steven Rathgeb, and Michael Lipsky. 1993. *Nonprofits for hire: The welfare state in the age of contracting*. Cambridge, MA: Harvard University Press.

Snijders, Tom A. B., and Roel J. Bosker. 2012. *Multilevel analysis: An introduction to basic and advanced multilevel modeling*. Los Angeles: Sage.

StataCorp. 2013. Stata 13 Base Reference Manual. College Station, TX: Stata Press. http://www.stata.com/manuals13/rtetrachoric.pdf

Tsukamoto, Ichiro, and Mariko Nishimura. 2006. The emergence of local non-profit–government partnerships and the role of intermediary organizations in Japan: Contractual relationships and the limits to co-governance. *Public management review*, *8*(4), 567-581.

Verschuere, Bram, Taco Brandsen, and Victor Pestoff. 2012. Co-production: The state of the art in research and the future agenda. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *23*(4), 1083-1101.

Voorberg, William H., Viktor Bekkers, and Lars G. Tummers. 2015. A systematic review of co-creation and co-production: Embarking on the social innovation journey. *Public Management Review*, *17*(9), 1333-1357.

Walls, M. 2014. *Private Funding Public Parks*. Resources for the Future.

Weisbrod, Burton A. 1988. The nonprofit economy. Cambridge, MA: Harvard University Press.

Wilsker, Amanda L., and Dennis R. Young. 2010. How does program composition affect the revenues of nonprofit organizations? Investigating a benefits theory of nonprofit finance. *Public Finance Review*, *38*(2), 193-216.

Young, Dennis R. 2007. Toward a normative theory of nonprofit finance. *Financing nonprofits: Putting theory into practice*, 339-72.

Figure 1 Theoretical Model for Nonprofits' involvement in Co-governance

Community Capacity

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

Nonprofits' Involvement in Co-Governance (Planning of Public Services)

Organizational Capacity

- Organizational Size (*H5+*)
- Organizational Age (*H6+*)
- Proportion Donative Revenue (*H7+*)
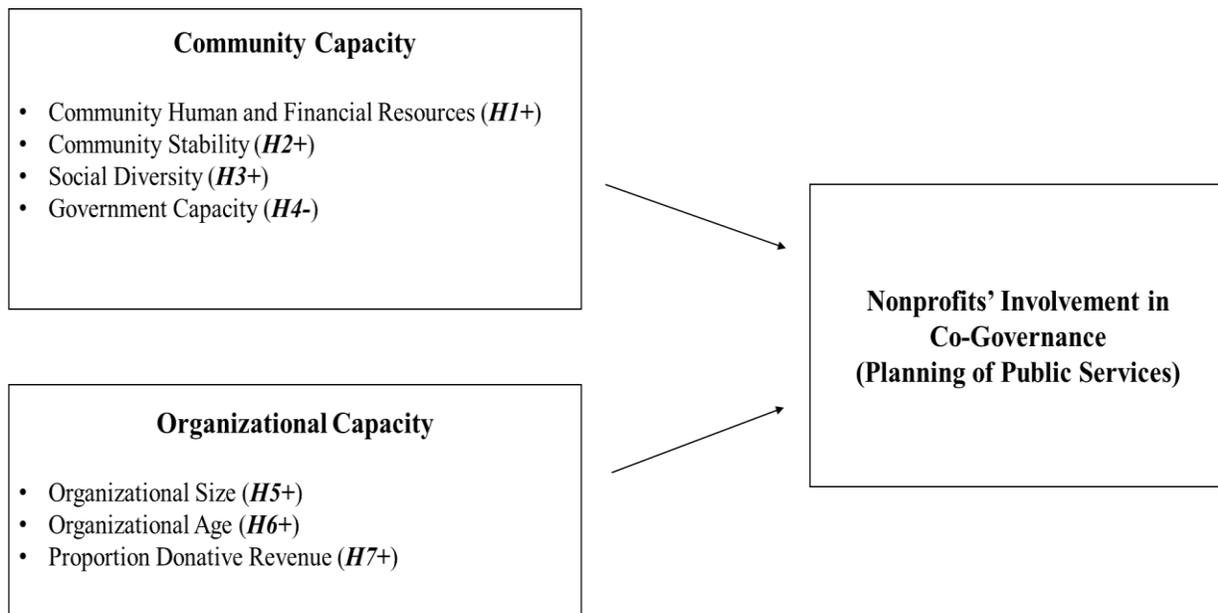
Table 1 Descriptive Statistics for Dependent and Independent Variables

Variables	Observations	Mean	SD	Min.	Max.
Organizational Level					
Park Planning	204	0.270	0.445	0	1
Log Total Expenditure	204	12.247	2.460	0	17.628
Organizational Age	204	19.417	11.20	2	63
Percentage Donative Revenue	204	80.061	28.269	0	100
City/County Level					
Percentage Park Spending of City Budget	204	2.890	1.721	0.169	8.231
Social Diversity Index	204	0.199	0.172	0.030	0.609
Community Resource Index	204	0	1	-1.917	2.021
Homeownership Rate	204	50.464	13.256	20.8	74.2
Percentage Votes to Democratic Candidate	204	69.243	14.138	0	89.3

Table 2 Correlation Matrix

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

Table 3 Supporting Activities of City Park-supporting Nonprofits

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

Note: 1) Park-supporting nonprofits can conduct activities listed in the table simultaneously. Therefore, the total frequency adds up to be much large 100%.

2) Only activities with more than 10% frequency are reported here to represent the major types of supporting activities of these nonprofits. Some of the dropped activities include consulting, grant-making, serving as funding intermediaries, and conducting research.

3) 10% of the organizations have been randomly assigned to another coder to ensure intercoder reliability.

Table 4 Exploratory Factor Analysis of Park-supporting Activities

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

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.

Table 5 Multilevel Logistic Regression Results

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

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