

Spotlight on Public Management at the Grassroots

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Interlocal Service Cooperation in U.S. Cities: A Social Network Explanation

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Local governments increasingly confront policy problems that span the boundaries of individual political jurisdictions. Institutional theories of local governance and intergovernmental relations emphasize the importance of networks for fostering service cooperation among local governments. Yet empirical research fails to examine systematically the effects of social networks on interlocal service cooperation. Do the individual networks of local government actors increase their jurisdiction's level of interlocal service delivery? Drawing data from the National Administrative Studies Project IV (NASP-IV), multivariate analysis is applied to examine this question among 919 municipal managers and department heads across the United States. The findings indicate that interlocal service cooperation increases when jurisdictional actors network frequently through a regional association or council of government and when they are united by a common set of professional norms and disciplinary values. Manager participation in professional associations, however, does not increase interjurisdictional cooperation. The key conclusion for local government practitioners searching for ways to increase collaboration: networks that afford opportunities for more face-to-face interaction yield better results for effective service partnerships.

Local governments are increasingly confronted by policy problems that span the boundaries of their individual political jurisdictions. Jurisdictional fragmentation complicates the management of boundary-spanning public infrastructure, environmental pollution, crime, regional economies, and other problems that spill over the borders of one city into the next. The complexity of these public problems increasingly requires multijurisdictional solutions. The transjurisdictional nature of local policy issues creates a need for collective action by fragmented local governments in order to effectively manage regional problems, minimize negative externalities, and maximize economies of scale (Feiock 2004, 2007).

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Service-sharing arrangements created through interlocal agreements (ILAs) represent one alternative for managing multijurisdictional problems. Interlocal service agreements can be formal or informal service-sharing arrangements in which one local government contracts with another for a service or provides the service to another, or in which multiple units pool their resources for joint service production (ACIR 1985; ICMA 1997). The flexibility of interlocal agreements makes them one of the most widely used tools for managing spillover effects and capturing economies of scale. With more than half of cities and counties in the United States using them for at least one function (ACIR 1985), interlocal service agreements represent one of the most preferred mechanisms for coping with problems of jurisdictional fragmentation.

Local government managers have long recognized the benefits that interlocal agreements afford. While there is nothing new about the use of interlocal agreements in the municipal landscape, scholars have recently demonstrated renewed interest in this time-tested management tool, and have begun to pave the way for new theoretical development in the areas of intergovernmental relations, metropolitan governance, and regionalism (Feiock 2007; Feiock and Park 2005; Frederickson 1999; Lubell et al. 2002; Savitch and Vogel 2000; Stephens and Wikstrom 2000; Wood 2006).

These new theoretical developments analyze interlocal agreements as a system of networks binding fragmented jurisdictions together. Described by Savitch and Vogel (2000) as the “complex networks approach,” this model of governance calls for multijurisdictional coordination through independent local governments cooperating in overlapping webs of interlocal agreements. Others have built on this concept using theories of institutions (Frederickson 1999; Frederickson and Smith 2003; Thurmaier and Wood 2002),

institutional collective action (Feiock 2004, 2007), and social network theory (Thurmaier and Wood 2002; Wood 2006) to highlight the role of social and interpersonal networks in building the trust among local governing officials that is needed to get interlocal service arrangements started and hold them together over time. The social network most frequently credited with stimulating the use of interlocal service arrangements is the council of government or similar types of regional planning organizations (Feiock 2007; Lackey, Freshwater, and Rupasingha 2002; Stephens and Wikstrom 2000; Thurmaier and Wood 2002). Others have argued that institutions such as professions and the shared disciplinary values they impart are another type of network that is important to the formation of interlocal service arrangements by providing a mechanism for the diffusion and instillation of professional public service norms and values (Brown and Potoski 2003; Frederickson 1999; Thurmaier and Wood 2002).

Regional associations such as councils of government provide opportunities for local public officials to interact on a routine and ongoing basis, a factor that is critical to the emergence of voluntary cooperation (Axelrod 1984). Local governance scholars have drawn on the social capital argument, reasoning that trust and norms of reciprocity will develop among local governing officials as a result of participation in regional planning organizations (Feiock 2007; Frederickson and Smith 2003; Olberding 2002; Wood 2006). Social network arguments in the institutional tradition contend that even diffuse networks such as professions and shared disciplinary norms will promote interlocal service agreements by creating ties that bind participants together in a shared philosophy and a set of professional norms.

Despite these compelling theoretical claims, there is a distinct lack of systematic evidence in the literature to support these theories, with previous multivariate explanations failing to account for social network explanations entirely (Krueger and McGuire 2005; Morgan and Hirlinger 1991; Wood 2006). The empirical research on social networks and interlocal service delivery that exists to date is restricted to case studies and anecdotal evidence (Cigler 1999; Lackey, Freshwater, and Rupasingha 2002; Thurmaier and Wood 2002). In limiting their scope to a single jurisdiction or region, previous studies have not systematically examined whether participation in regional planning organizations, professions, disciplines, and other forms of social networks actually increases the use of interlocal service arrangements among local governments.

This study aims to address this oversight in the literature by examining the social networks of local government actors, along with other factors, in promoting the use of interlocal service arrangements. Participation in three individual-level social networks is examined: local government actors' participation in a regional association such as a council of government, participation in a professional association, and membership in the professional public management discipline. While other types of networks might also increase service cooperation, we chose to study these three because they represent the networks most frequently cited in the literature on interlocal service cooperation. Negative binomial regression is used to estimate a model of interlocal service delivery that accounts for these three social networks of local government actors, while controlling for local fiscal capacity and the economic and demographic characteristics of the jurisdiction.

Our analysis contributes to the emerging literature on local government cooperation by examining the role of networks in interlocal service delivery through a large-scale study of these patterns among municipalities located throughout the United States. We describe the details of these cities and our study next, following a discussion of institutions, social networks, and institutional collective action that provides the theoretical lens for our analysis.

Social Networks and Interlocal Service Delivery

Three streams of theory prescribe a role for social networks in predicting interlocal service cooperation: the administrative conjunctions theory of metropolitan governance, institutional collective action, and network theory. Though drawn from differing orientations of institutionalism, rational choice, and embeddedness of social structures, these theoretical approaches converge on the principle that social networks help to establish trust, create norms of reciprocity, and reduce transaction costs, thereby increasing the likelihood that local government officials will engage in service cooperation. In political science scholarship, a classic distinction exists between rational choice theories and institutional approaches. In the context of studying local government service delivery, Brown and Potoski (2003) argued that these two theoretical approaches provide complementary explanations for service delivery decisions. We concur that social networks bridge these two theoretical frameworks and provide the primary explanation for local government actors' decisions to engage in interlocal service cooperation. We offer a brief description of each of these theories, and identify specific forms of social networking that may increase interlocal service delivery.

Frederickson's theory of metropolitan governance (1999; Frederickson and Smith 2003) suggests that remedies to metropolitan fragmentation are most likely to be found in various forms of voluntary cooperation, networking, and institution building, as opposed to traditional instruments that rely on power, control, and coercion. Frederickson argued that "administrative conjunctions" represent one such voluntary avenue for securing cooperation. Administrative conjunctions are ties linking professional public servants together across jurisdictional boundaries. The ties that connect public managers together, according to Frederickson, are a system of shared values and professional norms imparted by their disciplinary training. Frederickson posited that conjunctive ties, and the staying power of civil servants, make professional managers the set of actors best suited for brokering and maintaining cooperative service arrangements across local government boundaries. He argued that professional managers will be more inclined toward interjurisdictional cooperation than elected officials, who have a shorter time horizon and may be averse to the electoral consequences of cooperation. In essence, administrative conjunction theory *is* social network theory, but applied to the members of a specific discipline—professional public managers.

The second theory prescribing a role for social networks in promoting interlocal service delivery is institutional collective action (Feiock 2004, 2007). The logic of institutional collective action suggests that local governments affiliated through social networks, such as regional planning organizations, will be more likely to cooperate in providing local public services. Feiock described institutional collective action as "the glue holding an institutionally fragmented community together," by local governments "acting collectively to create

a civil society that integrates a region across multiple jurisdictions through a web of voluntary agreements and associations” (2004, 6).

According to the institutional collective action model, the costs of bargaining and negotiating create a disincentive for local public officials to enter into interlocal service agreements. Prospective parties to an interlocal agreement must weigh the anticipated benefits of such an arrangement against the time and monetary costs of bargaining, negotiating, and ex post monitoring. These transaction costs (Williamson 1981), according to Feiock (2007), represent a principal barrier to local government cooperation. While these costs create a disincentive for local public officials to use interlocal service agreements, the institutional collective action framework posits that the transaction costs of cooperation can be mitigated by networks and networking among local government actors. Some types of networks provide opportunities for repeated face-to-face interactions, helping to build trust and establish norms of reciprocity among local officials. As trust among local officials increases, entering into cooperative agreements becomes more attractive because bargaining, and negotiating the agreements requires less time, and the subsequent monitoring and enforcement costs are also reduced. Networks are thus essential to institutional collective action, as they aid in minimizing transaction costs that serve as obstacles to negotiating and maintaining agreements.

Frederickson’s and Feiock’s theories converge on the point of social networks. Social network theory views all actors as being embedded within, and thus shaped by, the patterns of relational ties they have to others (Wasserman and Faust 1994). This pattern of relational ties makes up an actor’s social structure, and network theory suggests that actors’ opportunities and constraints are shaped by this social-structural environment. For example, local government administrators can be described as actors embedded within a context. The number and types of ties that a local government actor has to others, and the extent to which they overlap, are important because these ties are thought to create benefits in the form of social capital. Based on community-level studies, Coleman (1990) and Putnam (1993) demonstrated that social networks create social capital. Coleman (1988) defined social capital as “intangible resources such as social norms, obligations, and trust that facilitate collective action.” Social capital is the individual and collective returns from investments in social relations (Lin 2001). It is an asset that accumulates as a result of trust and mutual favors. For example, one local government may come to the aid of another in the event of a natural disaster or provide assistance in solving a crime, even in the absence of a formal agreement, based on the assumption that the recipient government will someday return the favor if needed. Coleman suggested that “like other forms of capital, social capital is productive, making possible the achievement of certain ends that otherwise would not be possible in its absence” (1990, 16).

Thus, when two local government actors are members of the same network, such as a council of government, or both are members of the same professional association, these affiliations should increase

the likelihood that their cities will cooperate through ILAs for some types of services. A vast literature on role sets confirms that there is a likely dependence between different sets of ties linking any given pair of actors. This notion of nested ties, or overlapping networks, is known as “multiplexity.” Multiplexity refers to “the tendency for two or more ties of different types to occur together; that is it to link the same pair of actors” (Carrington, Scott, and Wasserman 2005, 164). Multiplexity is the aspect of network theory that describes overlapping ties among actors and suggests that actors’ positions in one set of relations (e.g., a regional association that meets monthly) are

likely to predict or reinforce positions in other sets of relations (ILAs between jurisdictions). The notion of multiplexity suggests that local government officials who are affiliated through professional associations or who participate in local government associations on behalf of their jurisdictions will have an increased likelihood of forming additional ties, such as ILAs.

Theories of administrative conjunctions, institutional collective action, and social networks point to three specific types of social networks that may help to promote interlocal service cooperation among local government administrators: regional associations, profes-

sional associations, and disciplines.

Regional Associations

Whether they are councils of government, metropolitan planning organizations, or some other form of network, regional associations provide local government officials with opportunities to interact on a routine basis, enhancing participants’ prospects for establishing trust and coordinating service delivery. For example, Thurmaier and Wood (2002) examined six local jurisdictions in the Kansas City metropolitan area and found that the metropolitan planning organization in the region functioned as a broker in facilitating interlocal service arrangements among cities in the region by providing forums for interaction among city managers, assistant managers, and department heads. Thurmaier and Wood’s analysis was built on Frederickson’s (1999) “administrative conjunction” theory of metropolitan governance. Thurmaier and Wood concluded that an underlying structure of social networks among city managers, administrators, and functional specialists created and sustained networks of interlocal service agreements.

Similarly, Lackey, Freshwater, and Rupasingha (2002) found that opportunities for officials to interact played an important role in decisions to cooperate on community development. These authors studied interlocal cooperation in rural Tennessee and found that when a neutral facilitator was involved in facilitating or brokering the cooperative arrangements (such as a council of government or regional organization), there was an increase in the amount of interlocal collaboration.

In a study of 134 municipalities in the Detroit metropolitan area, LeRoux (2008) found that cities had a greater likelihood of entering into ILAs for a number of services when the jurisdiction was a member of a community conference, which is a small-scale type of a regional council. These small regional associations provided

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opportunities for local government officials to interact on a frequent basis and to establish mutual trust, laying the foundation for member cities to engage in interlocal service agreements in subsequent years. Lubell et al. (2002) demonstrated that voluntary watershed partnerships emerge on the basis of trust, and these partnerships increase both in number and scope of activities when social capital is sufficient to overcome the transaction costs that present barriers to collective action. This logic leads us to the following testable proposition:

H₁: Local government administrators who network frequently through a council of government will demonstrate greater use of interlocal service agreements.

Professional Associations

Professional associations represent another type of social network that may help to promote interjurisdictional cooperation. Local government administrators who share an affiliation as members of a professional association are more likely to arrive at consensus related to best practices and to see the value of increased cooperation. Citing the International City/County Management Association, Brown and Potoski (2003) suggested that professional associations provide a central mechanism for the diffusion of information and for the adoption of common rules and practices among members of the city management profession. City administrators and department heads who are members of professional associations should be more likely to use interlocal agreements, and to look for ways to maximize coordination opportunities with other communities. Therefore, we propose the following hypothesis:

H₂: Local government administrators who participate in professional associations will demonstrate greater use of interlocal service agreements.

Disciplines

Academic disciplines represent normative learning institutions through which members are socialized into a common set of professional norms, values, and beliefs. Frederickson (1999) argued that disciplines function as institutions, imparting a shared system of norms and values among members. He suggested that in the absence of coercive government mandates, “administrative conjunctions” and “epistemic communities” serve as mechanisms through which cities might cope with the problems of jurisdictional fragmentation. Acknowledging the work of Ernst B. Haas (1960) and Peter M. Haas (1990), Frederickson described how the administrative conjunction theory of metropolitan governance is premised on the notion of “epistemic communities,” which Haas described as “a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain or issue-area” (1990, 3). Frederickson observed that professionals who operate “within epistemic communities have a shared set of normative beliefs, causal beliefs, notions of validity and ‘truth,’ and a common set of practices” (1999, 707). According to Frederickson, “the power to carry out interagency conjunction is based on the professional’s authoritative claim to knowledge” (1999, 708).

Professionally educated public managers are believed to govern with a public-serving ethic (Frederickson 1999; Pandey and Stazyk

2008), while elected officials govern in ways that increase their prospects for reelection or election to higher office. Professional public managers are socialized through their educational training in public administration to embrace values of efficiency and effectiveness as part of their discipline, and therefore may share common assumptions that facilitate interlocal cooperation. Moreover, the longer tenure of career public servants forces them to look further into the future when considering alternatives to managing jurisdictional problems. Professional managers are also more likely to recognize the long-term consequences of disparities in service levels across the region and feel a professional obligation to cooperate in order to promote consistent service standards (Wood 2006). As a result of their disciplinary training, professional public managers with an MPA degree share a common commitment to values of efficiency and equity imparted by a master’s education that may make them more inclined toward collective problem solving. For example, studying the service delivery patterns of more than 100 local governments in the state of Michigan, Carr, LeRoux, and Shrestha (2009) found that a city manager’s possession of an MPA degree was linked to the jurisdiction’s increased use of interlocal service agreements. Based on this, we propose the following hypothesis:

H₃: Local government administrators who are academically trained in the discipline of public administration will demonstrate greater use of interlocal service agreements.

Data, Method, and Measures

The data for this study were collected in Phase IV of the National Administrative Studies Project (NASP-IV). NASP-IV is a multi-method study, a key part of which is a Web-based survey administered to 3,316 city managers, assistant managers, and municipal department heads of U.S. cities with populations of 50,000 and more.¹ This sampling frame was constructed from contact information provided by the International City/County Management Association.² Each respondent in the study sample received an initial letter through the U.S. mail that introduced the study and provided details about how to participate in the survey. Each potential respondent was directed to the study Web site and provided with a study participation code to access the survey. The survey generated responses from 1,538 local public managers, for a total response rate of 46.4 percent. A sizable majority of respondents were males of middle age.³ Additional information about the NASP-IV data collection and study protocol is provided in the endnotes.⁴

We supplemented our survey database with additional information on each jurisdiction, namely, measures of fiscal capacity from the U.S. Census of Governments (2007) and population demographics from the U.S. Census Bureau (2000). We relied on these databases to test the hypotheses described earlier.

Dependent Variable

Our dependent variable is interlocal service cooperation. Interlocal service cooperation is measured as the number of interlocal agreements reported at the municipal department level by each respondent. The survey asked participants to provide a numeric value in response to the following question: “If interlocal cooperation is defined as *formal written agreements with other local jurisdictions for service delivery* (e.g., service contracts, Memoranda of Understanding, etc.), please indicate the extent to which your department

engaged in this type of cooperation in the past fiscal year.” Thus, values provided in response to this question serve as the dependent variable in this analysis. Table 1 displays the descriptive statistics for each of the model variables.

Independent Variables

Our model is designed to test three measures of social networks. The first measure is networking through a regional association. Respondents were asked to indicate on a six-point scale (1 = once a year or less, 6 = daily), “How frequently do you interact with individuals through regional associations, such as Councils of Government?” As respondents’ interaction with their regional association increases, we anticipate their jurisdiction’s level of interlocal service cooperation to increase.

The second type of social network is a measure of professional networking. We asked our survey participants to indicate whether they participate in a professional association. The question was worded as follows: “Are you a member of a professional society (such as ASPA, ICMA, GFOA, NRPA, APWA, APA, etc.)?” The response options were “yes” and “no,” so the measure is a dichotomous variable, coded 1 if the respondent belongs to such an association, and 0 if not. We expect interlocal service cooperation to increase when respondents are participants in these professional networks.

The third network is a type of tie that binds public servants together in a shared discipline. Respondents were asked on the survey to indicate their degree and discipline. We created a dichotomous variable, coding those with an MPA degree as 1 and those trained in another other discipline as 0. We hypothesize that respondents with an MPA degree will be more inclined to engage in interlocal service cooperation because their disciplinary training generally encourages public managers to place a greater premium on public service values that are consistent with the ends of service cooperation (efficiency, effectiveness, equity, and so on).

Control Variables

Several variables are included as controls, based on literature that suggests these factors may influence the dependent variable. These variables are designed to control for the fiscal, economic, and demographic characteristics of the jurisdiction. Because our primary interest in this study is to assess the influence of social networks on

interlocal service cooperation, we do not devote space to interpreting the effects of these variables. Yet we believe it is important to control for these influences, so we offer a brief description of how each is measured and a rationale for using it as a control.

Four measures of local economic characteristics are included in the models: intergovernmental revenues from state and federal sources, fiscal stress, and two measures of community wealth. Intergovernmental revenues are measured as the proportion of the jurisdiction’s total budget that comes from state and federal sources. Local governments receiving large shares of their budget from state or federal sources may have less financial motivation for cooperation because they have adequate resources to support their service costs with the budget enhancement brought by intergovernmental funds (LeRoux and Carr 2007; Morgan and Hirlinger 1991). On the other hand, some federal revenue streams such as homeland security grants encourage or mandate cooperation by cities, so federal revenues could also increase cooperation. Consistent with previous research (Morgan and Hirlinger 1991; Sharp and Elkins 1991), we use per capita property tax as a measure of fiscal stress. Morgan and Hirlinger (1991) argued that local governments with high per capita property taxes may be approaching their tax limits, and therefore may be more likely to seek cooperation with other local governments for service provision as a way to maintain service levels in the face of fiscal stress.

Community wealth, or the lack thereof, may also influence municipal choices for interlocal service cooperation. Community wealth is measured in two ways: per capita income, and per capita income squared. The squared term is included because previous empirical work has proven the relationship between wealth of the population and use of interlocal agreements to be nonlinear (Morgan and Hirlinger 1991). Jurisdictions with low per capita income are likely to be more fiscally stressed, and therefore more likely to employ interlocal service agreements. As average wealth increases, local governments are increasingly likely to have adequate resources for autonomous service provision and will have less incentive to cooperate, so reliance on interlocal agreements declines as wealth increases. However, communities that have *very* high per capita income may opt to purchase goods and services from other governments rather than provide them directly. Morgan and Hirlinger (1991) speculated that one reason very wealthy communities are more likely to use

Table 1 Descriptive Statistics for Model Variables

Variable	Mean	Std Dev	Min	Max
Interlocal cooperation	11.22	22.70	0	200
Network 1: Regional association/COG	3.28	1.26	1	6
Network 2: Professional association	.76	.43	0	1
Network 3: MPA degree	.37	.48	0	1
Intergovernmental revenue fed/state	51088.7	124568.3	225	1749512
Per capita property tax	36.61	605.75	.37	11556.6
Per capita income	22252.25	6545.40	9340	63015
Per capita income squared	541538929	367589086	87235600	3970890225
Population	153764.1	228159.6	50278	3694834
Population change 1990–2000	22394.73	38455.98	-84860	337591
Population density	94.59	76.62	13.74	1627.28
Percent population nonwhite	28.82	16.48	2	88
Percent population 65+	22.5	6.40	7	52

interlocal agreements is their residents have preferences for a wider array of services, can afford specialized services, and tend to be more open to experimentation with alternative service delivery.

Demographic and population characteristics are also likely to affect cities' use of interlocal service agreements. We include five measures: population size, population growth, population density, percentage of the population that is nonwhite, and percentage of the population that is age 65 and older. Population size, population growth, and population density serve as indicators of the jurisdiction's propensity for autonomous provision and help to proxy local demand for services. The population variable is measured as the jurisdiction's total population in 2000, based on U.S. Census data. As population size increases, communities may be less likely to use interlocal agreements. Population density is measured as the total number of persons per square mile; it is also likely to have a negative effect on cooperation. Jurisdictions with low population density are susceptible to diseconomies of scale in providing public services, particularly for services that may involve large capital outlays. Population change is measured as the increase or decrease in the jurisdiction's population between 1990 and 2000. Communities with substantial net population gain are less likely to use interlocal service agreements, but those losing population might be more likely to use them to compensate for the decline in their tax base.

The literature demonstrates that two specific constituencies influence cities' use of interlocal service agreements: senior citizens and racial minorities. Influence of the senior population is measured as the proportion of total population that is age 65 and older. Morgan and Hirlinger (1991) found the senior population to have a deterring effect on cities' use of interlocal agreements. They speculated this is because the senior population tends to be more engaged in community politics, and more likely to display a preference for the status quo in local service delivery. Work by Feiock and Park (2005) shows that racial heterogeneity (a large nonwhite population) decreases the likelihood of interlocal service cooperation. Oakerson (2004) contended that homogeneity of the citizenry enables local public officials to "speak with one voice" in making governing decisions on behalf of the local electorate. The use of interlocal agreements should decrease as racial heterogeneity increases, as public officials negotiating service-sharing deals will have greater difficulty accommodating diversity of preferences, and thus will resort to in-house production to avoid controversy. Racial heterogeneity is measured as the proportion of total population that is nonwhite.

Method of Analysis

The effects of social networks on interlocal service cooperation are estimated using negative binomial regression. Given that our dependent variable is count data measured in discrete units, negative binomial regression was used to as the method of estimation. Ordinary least squares regression may produce biased regression coefficients when used to analyze count data, leading to errors in the interpretations and conclusions drawn from these model estimates (King 1989; Long and Freese 2006). Poisson regression may also be used for analyzing count data, although regression diagnostics revealed that our count data are overdispersed, so negative binomial regression was the most appropriate estimation method. Negative binomial regression addresses the failure of Poisson for dealing with overdispersion by adding a parameter that reflects unobserved

heterogeneity among observations (Long and Freese 2006). Moreover, in overdispersed distributions, the standard errors in a Poisson-estimated model will be biased downward, producing spuriously large *z*-values (Cameron and Trivedi 1986). Finally, it is important to note that negative binomial regression lacks an overall model fit statistic equivalent to the *R*² measure found in ordinary least squares regression (Long and Freese 2006).

Findings

Do the individual-level social networks of local government administrators increase their department's use of interlocal agreements? Table 2 displays the findings from the empirical analysis.

Given that our response variable is a count, which can also be considered a "rate," the results are expressed as incident rate ratios, which alternatively can be expressed as the difference of the log of expected counts. For ease of interpretation, we express the effects of the independent variables as the incident rate, which allows us to demonstrate the impact that a one-unit increase the independent variable has on the rate at which administrators enter into interlocal service arrangements with other jurisdictions.

Our first hypothesis predicted that administrators who network more frequently through their regional association or council of government would demonstrate an increased use of interlocal agreements. The results yield strong support for this hypothesis, as there is a positive and statistically significant relationship between networking through a regional association and administrators' use of interlocal service agreements. For each unit increase in an administrator's frequency of participation in regional associations, his or her department's rate of interlocal contracting increases by 1.26 agreements, holding other variables in the model constant (*p* < .01). Thus, the variable is one of the most substantively significant in our

Table 2 Effects of Social Networking on Interlocal Service Cooperation

Independent Variable	IRR	SE	z-score
Network variables			
Regional association/COG	1.26***	.039	7.53
Professional association	1.29	.223	1.52
MPA degree	1.22***	.100	2.49
Control variables			
Intergovernmental rev fed/state	.999	6.52 ^{e-07}	-0.32
Per capita property tax	1.00	.000	0.69
Per capita income	.999	.000	-1.21
Per capita income squared	1.00	7.28 ^{e-10}	0.98
Population	1.00	4.29 ^{e-07}	1.39
Population change 1990–2000	1.00	1.56 ^{e-06}	0.98
Population density	.881***	.036	-3.08
Nonwhite population	1.27	.350	0.90
Population 65+	4.73**	3.40	2.16
Log likelihood	-3073.6974		
LN chi2(12)	114.22***		
LN alpha	.252		
<i>N</i>	919		

*** *p* < .01; ** *p* < .05; * *p* < .10.

Robust standard errors are used. Negative binomial regression lacks an overall model fit statistic equivalent to the *R*² measure found in ordinary least squares regression. For ease of interpretation, independent variables effects are expressed in terms of incident rate ratios (IRR) rather than standard coefficients.

model. If we consider that the mean number of interlocal agreements for each city is 11.2 (table 1), the expected count for each departments use of interlocal agreements increases by 1.26 with every corresponding unit increase in the manager's or department head's participation in regional association meetings and committees.

This finding that interlocal service delivery increases with managers' networking in regional association aligns with the social capital arguments underlying our predictions for the effects of regional institutions. Through their governance, work groups, and committee structures, regional associations provide many opportunities for ongoing interactions among institutional actors, which is an important condition for norms of trust and reciprocity to develop at levels required for cooperative agreements to emerge and persist over time (Axelrod 1984). The social ties created through these interactions may be sufficient to reduce transaction costs and allow voluntary cooperative service arrangements to develop. Of course, it is likely that once cities are members of regional associations and are cooperating through ILAs, more frequent interaction through the regional council will serve to reinforce, strengthen, and possibly expand ILA cooperation.⁵

Our second hypothesis stated that local government administrators who participate in a professional association will rely more extensively on interlocal service agreements to deliver their departments' services. However, as the results in table 2 suggest, this hypothesis is not supported. The professional networking variable has no statistical effect on the rate at which departments employ interlocal service agreements.⁶ Professional associations provide an important mechanism for the diffusion of information, as well as opportunities for their members to communicate and learn about best practices. However, professional associations represent a substantively different type of network than councils of government and regional associations. One explanation for the counterintuitive finding with regard to professional associations is that this form of networking affords managers fewer opportunities for face-to-face contact than regional associations. Professional associations represent what Scholz, Feiock, and Ahn (2005) described as a "weak-tie" type of network, rather than the "strong-tie" or trust-enhancing networks created through routine face-to-face interactions in regular meetings of a regional association.

The third hypothesis suggested that administrators with an MPA degree will engage in greater interlocal service cooperation with other jurisdictions because their disciplinary norms and values are consistent with the goals of interlocal service cooperation (desire for efficiency, effectiveness, equity, long-term outlook, etc.). This hypothesis is also supported, as the disciplinary network variable (MPA degree) has a positive and statistically significant effect on the rate at which departments employ interlocal service agreements. When a local government administrator has been professionally trained in the discipline of public administration, as measured by having an MPA degree, the rate at which the administrator's department uses interlocal service agreements increases by a rate of 1.22 agreements, holding other variables in the model constant ($p < .01$). Thus, the effects of a manager having an MPA degree are not

only statistically significant, they are substantively significant; when the manager or department head has an MPA degree, his or her department's expected count of interlocal agreements increases by a rate of 1.22 agreements, when all other variables are held constant at their means. This finding comports with Frederickson's (1999) argument that professional public managers will be more inclined toward interlocal cooperation as a result of their disciplinary training, and confirms recent empirical findings by Carr, LeRoux, and Shrestha (2009) demonstrating a positive link between cities likelihood of using interlocal service agreement when the manager has an MPA degree. Our finding that an MPA degree substantively increases administrators' rates of cooperation with other jurisdictions lends support to institutional theories of metropolitan governance and interlocal cooperation (Brown and Potoski 2003; Frederickson 1999; Frederickson and Smith 2003; Thurmaier and Wood 2002; Wood 2006).

Few of the control variables are statistically significant. Only population density of the jurisdiction and the over-65 population proportion are statistically significant, with a larger senior population size increasing the rate of using interlocal agreements, and population density decreasing their use ($p < .10$). One explanation for why more densely populated communities cooperate at higher rates is that they are typically "full-service" cities, making them well positioned to sell off excess service capacity to less developed neighboring jurisdictions that cannot afford to provide the service autonomously or can purchase the service externally at a cheaper cost than producing it in-house. The finding that cities with larger proportions of senior citizens engage in higher rates of interlocal service cooperation could mean this constituency is more dependent on public services or have distinct preferences or needs for specialized services that the city has to purchase elsewhere. For example, many cities contract with neighboring jurisdictions for parks and recreation programs for seniors and use of senior centers through a fee-sharing agreement. Contrary to conventional wisdom (Bartle and Swayze 1997; Ferris and Graddy 1986; Sonenblum, Kirlin, and Ries 1977), we find that fiscal stress and economic characteristics of the jurisdiction have no influence on the use of interlocal service arrangements (for other studies reporting null effects of fiscal stress on interlocal service delivery, see Morgan and Hirlinger 1991; Thurmaier and Chen 2005).

Conclusions and Implications

The goal of our analysis was to empirically test the theoretical claims that social networking by local government administrators increases their jurisdiction's propensity to engage in cooperative service delivery with other local jurisdictions. Do the individual-level networks of local government administrators matter for interlocal service delivery? Our study suggests that networks indeed matter; however, the findings reveal that networks are not all equally effective in promoting interlocal service delivery.

We find that networking through a regional association, such as a council of government, and being linked to members of the same discipline both substantially increase cooperation, but participation in professional associations does not. This suggests that networks have important qualitative differences that promote

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increased cooperation. Networks such as regional associations or councils of government are trust-enhancing forms of networks, increasing the likelihood of cooperation because they provide opportunities for frequent face-to-face interactions and provide a forum for local government managers to get to know each other and compare needs. Networks created by shared disciplinary training in the profession of public administration may also enhance trust as managers may seek out cooperation partners that they know will be like-minded and share the same goals and values. Entering into cooperative agreements with another manager who operates from a similar value system may help to reduce the transaction costs typically associated with bargaining and negotiating agreements, and provide confidence that ex post monitoring costs will be lower. What may be more important about this particular network, however, are the specific professional norms and values imparted by the MPA. As a discipline born out of the reformist tradition, public administration places a premium on values of efficient and effective service delivery. Managers who are linked through the public administration discipline are likely to make decisions with a longer-term outlook, and to hold relatively consistent professional values, including a commitment to maximizing efficiency and effectiveness in municipal service delivery within their jurisdiction—values that align with the objectives of interlocal service cooperation (Nalbandian and Edwards 1983).

Yet our findings about the effects of networks are not entirely consistent, and they point to the need for further research about the effects of various types of networks on promoting interlocal cooperation. Our test of the impact of professional associations on interlocal service delivery reveals that this variable falls just short of statistical significance. Although professional associations also provide opportunities for face-to-face interaction among public managers, they do so to a lesser extent than regional associations. Managers' participation in professional society meetings is likely to occur once to a few times per year, as opposed monthly or more in regional associations. Similar to disciplinary networks (in this case, the MPA degree), networks created by membership in a professional association should also help to diffuse information about best practices within the profession and instill common norms and values among members of public service professions. Possible explanations for our null findings about this type of network may be a function of the infrequent interactions these networks afford, or the fact that different types of professional associations promote different values, and respondents in our study may be members of more than one. Future research would benefit from improved measures of professional association participation, but at the same time should attempt to parse out the different effects of an MPA degree versus membership in *specific* professional associations.

Our analysis has both theoretical and practical significance. It contributes to the emerging literature on metropolitan governance by examining the role of regional network organizations in interlocal service delivery, and it has important implications for local government practitioners searching for ways to increase collaboration. In terms of theoretical contributions, our study subjects contemporary

theories of interlocal cooperation to a large-scale multivariate test, and in doing so, finds empirical evidence of a systematic relationship between social networks of local government administrators and the use of interlocal service delivery. Thus, our study provides an important contribution to the literature by complementing the existing case-based research and lending support to each of the three prevailing theories of cooperation that draw on social network explanations on which we premised our analysis.

Our findings also have important implications for theoretical debates about the value of voluntary associations in enabling regional cooperation. While one theoretical argument suggests that voluntary self-governance is made possible by participation in regional associations and institutions such as councils of government (Feiock 2004, 2007; Ostrom 1990), critics of such councils and other types of regional associations (Barnes 1969; Frisken 1973; Stephens and Wikstrom 2000; Zimmerman 1983) have argued that these institutions have limited value for fostering interlocal cooperation because

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they are voluntary, and lack the coercive power of government to enforce cooperative agreements. Our findings provide new evidence that voluntary associations are effective for increasing cooperation, and suggest that critics may have underestimated the degree of social capital generated by these networks. While they lack the authority to enforce mandates for regional cooperation, our findings suggest that regional associations are nevertheless effective in promoting and reinforcing voluntary cooperation through interlocal service agreements.

Our study also yields a number of insights for local government practitioners searching for opportunities to increase collaboration with other jurisdictions. First, managers who are considering the use of interlocal service arrangements are likely to find that the time invested in attending meetings and serving on committees in regional associations pays great dividends in terms of building relationships with prospective cooperation partners. Networks such as regional associations that provide frequent opportunities for face-to-face interactions may be better suited to promoting strong ties between institutional actors that are necessary for trust to develop. Moreover, managers who are professionally trained in public management may find it easier to forge cooperative agreements and negotiate the details with others who share their disciplinary training. By contrast, larger, more diffuse networks such as professional associations in which members are loosely linked through weak ties may be less effective for promoting interlocal service delivery, although these networks still have value for individual managers by serving an information-bridging function and providing managers with updates on current practices and emerging innovations in the field. Ultimately, if the objective is to increase interlocal service delivery, belonging to a small organization that is made up of spatially proximate members may be more useful than belonging to a large organization whose members may be geographically distant and lack frequent personal contact.

While this analysis has shed additional light on the role that social networks play in interlocal service delivery, a few limitations must

be noted. This study takes into account the most common types of networks to which public managers might belong and participate, so we do not take into account the full range of network venues that may promote interlocal service cooperation. While our findings help to advance understanding about the impact of networks on interlocal service delivery, future studies would greatly benefit from improved indicators of networks and networking. This analysis also does not take into account the differing cultures that may exist among various functional units that may influence the likelihood of interpersonal networking and cooperation. For example, economic development directors may be more disposed toward competition among their counterparts in other jurisdictions, whereas public works directors might share more of a culture of cooperation. Do certain types of functional specialists engage in social networks at different rates, and if so, what impact does this have on their department's propensity to cooperate for services? Another limitation of our study is that our cross-sectional data make it impossible to state with certainty that regional council membership precedes the formation of ILAs. Future research can improve upon our study by using time-series investigations to examine the sequence of events and isolate regional association membership as precipitator to entering into interlocal agreements. Finally, this study was restricted to large cities, so while our findings are representative of large U.S. cities, they may or may not reflect determinants of interlocal service delivery of all municipalities. Despite these limitations, this analysis moves us one step further in understanding the role that social networks play in interlocal service delivery, highlights the qualitative differences among various forms of social networks, and points to a number of ways that future studies of interlocal service delivery might be improved

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Notes

1. The theoretical population of interest for NASP-IV comprised senior managers (both general and functional) in U.S. local government jurisdictions with populations of more than 50,000. The general managers included the city manager and assistant/deputy city managers. Functional managers included in the study headed key departments, namely, finance and budgeting, public works, personnel and human resources, economic development, parks and recreation, planning, and community development. The 1,538 respondents came from 545 different jurisdictions, with 1 respondent from 126 jurisdictions, 2 respondents from 130 jurisdictions, and 3 or more from 289 jurisdictions.
2. The sample design and construction for the NASP-IV study was aided by the International City/County Management Association (ICMA). The ICMA is widely regarded as the authoritative source of

information about U.S. local government jurisdictions and professionals serving in these jurisdictions. Based on the study criteria, the ICMA compiled a list with contact details of potential respondents (the ICMA was not able to provide e-mail addresses because of its policy of not sharing e-mail addresses). The NASP-IV team used the initial list provided by the ICMA and augmented it in a number of ways to finalize the sample. These steps—relying on publicly available information on different local government jurisdictions and their management team—included (1) verifying the accuracy of the information, (2) augmenting the list where the ICMA list did not have complete information, (3) correcting the list to ensure that only individuals who met study criteria were on the list, and (4) compiling working e-mail addresses for the respondents in the sample.

3. The mean age of respondents was 51.4, with an interquartile range of 10 (25th percentile being 47 and 75th percentile being 57). A sizable majority were male (70.6 percent), white (85.9 percent), highly educated (more than 60 percent with graduate degrees), and well compensated (68.3 percent with salaries over \$100,000). In terms of functional specialization of the managers, 28.6 percent were general managers (city manager or deputy or assistant city manager), and the rest managed specific city departments and/or functions. This distribution of functional specialization of respondents closely matched the distribution of functional specializations in the sample.
4. The study protocol was reviewed and approved by the Institutional Review Board at the University of Kansas. Upon visiting the study Web site, the respondent was provided with an informational note about their rights as a potential study participant. This note highlighted that participation was voluntary and that, except for the respondent's time, there were no foreseeable risks and that the study team would take all necessary steps to protect the confidentiality of respondents, including conducting analyses and reporting results at the aggregate level only. After the initial letter by U.S. mail, multiple methods were used in follow-up efforts to contact the respondents—e-mail, fax, and phone calls. Most measures used in the study have been tested and validated in earlier studies; some measures were developed in earlier administrations of the National Administrative Studies Project; and yet others were written and/or refined for NASP-IV.
5. As one reviewer pointed out, our measurement of networking through a regional council could have an endogenous relationship to municipal participation in interlocal service agreements. We share the reviewer's concern about endogeneity and agree that once cities are members of regional associations and are cooperating through interlocal agreements, more frequent interaction through the regional council likely serves to reinforce and strengthen interlocal service cooperation. However, we believe that the possibility of a reverse causal pathway (interlocal service agreements leading to municipalities acquiring membership in regional councils) is unlikely, for two reasons: First, one reason that municipalities enter into interlocal service agreements to save money. Municipal entities, motivated by concerns for saving money, are unlikely to pay substantial membership fees to join regional councils. Second, participation in regional councils is also costly in terms of managers' time. It seems unlikely that a preexisting interlocal agreement would be enough to persuade a manager to convince his or her council to pay the membership fee so that he or she could participate in meetings. While we lack time-series data needed to definitively establish this ordering of events, our findings nevertheless demonstrate a strong, positive relationship between public managers' participation in regional councils and their cities' use of interlocal service agreements.

6. Our survey also contained a question capturing the frequency of participation in professional associations. The question was worded as follows: "I attend as many professional society meetings as possible." Respondents were asked to indicate their level of agreement with this statement on a scale from 1 (strongly disagree) to 7 (strongly agree). We also tested our model, substituting this measure for the dichotomous measure of whether the respondent was a member of a professional association, but this alternate measure produced no difference in the results.

References

- Advisory Commission on Intergovernmental Relations (ACIR). 1985. *Intergovernmental Service Agreements for Delivering Local Public Services: Update 1983*. Washington, DC: Government Printing Office.
- Axelrod, Robert. 1984. *The Evolution of Cooperation*. New York: Basic Books.
- Barnes, Philip W. 1969. *Metropolitan Coalitions: A Study of Councils of Government in Texas*. Austin: Institute of Public Affairs, University of Texas.
- Bartle, John R., and Richard Swayze. 1997. Interlocal Cooperation in Nebraska. Unpublished report prepared for the Nebraska Mandates Management Initiative.
- Brown, Trevor L., and Matthew Potoski. 2003. Transaction Costs and Institutional Explanations for Government Service Production Decisions. *Journal of Public Administration Research and Theory* 13(4): 441–68.
- Cameron, A. Colin, and Pravin K. Trivedi. 1986. Econometric Models Based on Count Data: Comparisons and Applications of Some Estimators and Tests. *Journal of Applied Econometrics* 1(1): 29–53.
- Carr, Jered B., Kelly LeRoux, and Manoj Shrestha. 2009. Institutional Ties, Transaction Costs, and External Service Production. *Urban Affairs Review* 44(3): 403–27.
- Carrington, Peter J., John Scott, and Stanley Wasserman. 2005. *Models and Methods in Social Network Analysis*. New York: Cambridge University Press.
- Cigler, Beverly A. 1999. Preconditions for the Emergence of Multi-Community Collaborative Organizations. *Policy Studies Review* 16(1): 86–102.
- Coleman, James. 1988. Social Capital in the Creation of Human Capital. Supplement, *American Journal of Sociology* 94: 95–120.
- . 1990. *Foundations of Social Theory*. Cambridge, MA: Belknap Press.
- Feiock, Richard C., ed. 2004. *Metropolitan Governance: Conflict, Competition, and Cooperation*. Washington, DC: Georgetown University Press.
- . 2007. Rational Choice and Regional Governance. *Journal of Urban Affairs* 29(1): 47–63.
- Feiock, Richard C., and Hyung Jun Park. 2005. Bargaining, Networks, and Institutional Collective Action in Local Economic Development. Paper prepared for the Annual Meeting of the Midwest Political Science Association, April 7–10, Chicago.
- Ferris, James, and Elizabeth Graddy. 1986. Contracting Out: For What? With Whom? *Public Administration Review* 46(4): 332–44.
- Frederickson, H. George. 1999. The Repositioning of American Public Administration. *PS: Political Science and Politics* 32(4): 701–711.
- Frederickson, H. George, and Kevin B. Smith. 2003. *The Public Administration Theory Primer*. Boulder, CO: Westview Press.
- Friskin, Frances. 1973. The Metropolis and the Central City: Can One Government Unite Them? *Urban Affairs Quarterly* 8(3): 395–422.
- Haas, Ernst B. 1964. *Beyond the Nation-State: Functionalism and International Organization*. Stanford, CA: Stanford University Press.
- Haas, Peter M. 1990. *Saving the Mediterranean: The Politics of International Environmental Cooperation*. New York: Columbia University Press.
- International City/County Management Association (ICMA). 1997. *Local Intergovernmental Agreements: Strategies for Cooperation*. Management Information Services Report. Washington, DC: ICMA Press.
- King, Gary. 1989. *Unifying Political Methodology: The Likelihood Theory of Statistical Inference*. New York: Cambridge University Press.
- Krueger, Skip, and Michael McGuire. 2005. A Transaction Costs Explanation of Interlocal Government Collaboration. Paper presented at the Eighth National Public Management Research Conference, September 29–October 1, Los Angeles.
- Lackey, Steven Brent, David Freshwater, and Anil Rupasingha. 2002. Factors Influencing Local Government Cooperation in Rural Areas: Evidence from the Tennessee Valley. *Economic Development Quarterly* 16(2): 138–54.
- LeRoux, Kelly. 2008. Nonprofit Community Conferences: The Role of Alternative Regional Institutions in Interlocal Service Delivery. *State and Local Government Review* 40(3): 160–72.
- LeRoux, Kelly, and Jered B. Carr. 2007. Explaining Local Government Cooperation on Public Works: Evidence from Michigan. *Public Works Management and Policy* 12(1): 344–58.
- Lin, Nan. 2001. *Social Capital: A Theory of Social Structure and Action*. New York: Cambridge University Press.
- Long, J. Scott, and Jeremy Freese. 2006. *Regression Models for Categorical Dependent Variables Using Stata*. 2nd ed. College Station, TX: Stata Press.
- Lubell, Mark, Mark Schneider, John Scholz, and Mihriye Mete. 2002. Watershed Partnerships and the Emergence of Collective Action Institutions. *American Journal of Political Science* 46(1): 48–63.
- Morgan, David R., and Michael W. Hirlinger. 1991. Intergovernmental Service Contracts: A Multivariate Explanation. *Urban Affairs Quarterly* 27(1): 128–44.
- Nalbandian, John, and J. Terry Edwards. 1983. The Professional Values of Public Administrators: A Comparison with Lawyers, Social Workers, and Business Administrators. *Review of Public Personnel Administration* 4(1): 1–11.
- Oakerson, Ronald J. 2004. The Study of Metropolitan Governance. In *Metropolitan Governance: Conflict, Competition, and Cooperation*, edited by Richard C. Feiock, 17–45. Washington, DC: Georgetown University Press.
- Olberding, Julie C. 2002. Does Regionalism Beget Regionalism? The Relationship between Norms and Regional Partnerships for Economic Development. *Public Administration Review* 62(4): 480–91.
- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.
- Pandey, Sanjay K., and Edmund C. Stazyk. 2008. Antecedents and Correlates of Public Service Motivation. In *Motivation in Public Management: The Call of Public Service*, edited by James L. Perry and Annie Hondeghem, 101–17. Oxford: Oxford University Press.
- Putnam, Robert D., with Robert Leonardi and Raffaella Y. Nanetti. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.
- Savitch, H. V., and Ronald K. Vogel. 2000. Paths to New Regionalism. *State and Local Government Review* 32(3): 158–68.
- Scholz, John, Richard C. Feiock, and T. K. Ahn. 2005. Policy Networks and Institutional Collective Action in a Federalist System. Paper presented at the Annual Meeting of the Florida Political Science Association, March 12, Tallahassee, FL.

- Sharp, Elaine B., and David R. Elkins. 1991. The Politics of Economic Development Policy. *Economic Development Quarterly* 5(2): 126–39.
- Sonenblum, Sidney, John J. Kirlin, and John C. Ries. 1977. *How Cities Provide Services: An Evaluation of Alternative Delivery Structures*. Cambridge, MA: Ballinger.
- Stephens, Ross G., and Nelson Wikstrom. 2000. *Metropolitan Government and Governance: Theoretical Perspectives, Empirical Analysis, and the Future*. New York: Oxford University Press.
- Thurmaier, Kurt, and Curtis Wood. 2002. Interlocal Agreements as Overlapping Social Networks: Picket Fence Regionalism in Metropolitan Kansas City. *Public Administration Review* 62(5): 585–98.
- Thurmaier, Kurt, and Yu-Che Chen. 2005. Elements of Successful Interlocal Agreements: An Iowa Case Study. Paper presented at the Creating Collaborative Communities Conference, Wayne State University, Detroit, MI.
- Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press.
- Williamson, Oliver E. 1981. The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology* 87(3): 548–577.
- Wood, Curtis. 2006. Scope and Patterns of Metropolitan Governance in Urban America: Probing the Complexities in the Kansas City Region. *American Review of Public Administration* 36(3): 337–53.
- Zimmerman, Joseph F. 1983. Can Government Functions Be “Rationally Reassigned”? *National Civic Review* 73(3): 125–31.

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