Pairwise Relations and Joint Ventures for Economic Development

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Abstract:

This paper explains the time needed to negotiate the costs and benefits of voluntary joint ventures among local governments for economic development purposes. The dyad between local governments is the unit of analysis. The characteristic of the institutional tie is collected for 90 cooperative arrangements identified through a survey of local government officials in 12 metropolitan areas. Since not all of the governments have established a joint venture, a Heckman two-stage selection model is used to correct for the selection bias. Extending recent work on Institutional Collection Action the results suggest that those communities with similar demographic and economic characteristics and a history of cooperation reduce negotiation time. The results also indicate that asset specificity is an important predictor for the amount of time needed to discuss joint venture activities.

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Introduction

Local governments are actively engaged in shaping their local economies with policies aimed at increasing employment and wages, building and maintaining an economic base and addressing fiscal issues. Not surprisingly, competition has been the norm in the policy area of economic development (Pagano and Bowman, 1997). Research indicates that municipal approaches towards development have changed as larger economic systems have evolved. The transition to a post-fordist economy, for instance, has resulted in communities reassessing their development efforts and moving towards more network relations. Smoke stack chasing policies have gradually, but not completely, given way to more entrepreneurial policies and innovative partnership arrangements with the private and public sectors (Bradshaw and Blakely, 1999).

Trends in local development policy indicate that cooperative intergovernmental projects among government units are steadily increasing (Agranoff and McGuire, 2003; Clarke and Gaile, 1998). Confronted with resident demands for adequate service levels and the changing dynamics of urban and regional economies, local governments are establishing agreements with one another to improve future development potential or maintain their existing industry base. As local governments become more active in horizontal relations, there needs to be a clearer understanding of the influential factors that underlie cooperative behavior.

Using the theoretical framework of Institutional Collective Action as a guide (Feiock 2007), this study empirically tests the extent to which prior relations and the similarities across communities reduce the time of negotiating the costs and benefits of intergovernmental agreements. In the first section I discuss transaction cost theory and the homophily hypothesis. I then outline how
exchange relations and the similarities and differences between communities influences negotiation. To more fully explain the time of discussing development effort activities, it is important to clearly identify the tie between cooperating local governments. Survey data collected from local governments is used to measure the dyadic relations and a two-step Heckman selection model is used as the analytic method. The findings indicate that community characteristics matter, as does the specificity of the policy and whether the partnering communities have a history of intergovernmental agreements. In the last section I discuss the implications of emerging voluntary networks of intergovernmental agreements and their relevance to metropolitan governance.

**Institutional Collective Action**

At the turn of the century, municipal reformers advocated for consolidation of government units to better manage urban affairs. By the middle of the century regional organizations in the form of Councils of Government were being established as a governance mechanism. Today, Metropolitan Planning Organizations are active in regional transportation planning and coordinating development agendas with the participation of local governments. At the same time as regional efforts have emerged (Feiock, Steinacker, and Park, 2007; Olberding, 2002), bilateral agreements among local governments are defining new institutional arrangements in metropolitan areas.

Rather than formal, imposed or mandated agreements, “emergent networks” of interlocal relationships can be naturally occurring and informal (Aldrich, 1976). Savitch and Vogel (2000), for example, have referred to horizontal voluntary agreements as linked functions. A complex network emerges where a large number of governments voluntarily cooperate through multiple overlapping webs of interlocal agreements. The bargaining and negotiation process between
government officials results in a new governance arrangement whereby the benefits of cooperating outweigh the costs of transacting (Lubell, Schneider, Scholz, and Mete, 2001).

The Institutional Collective Action (ICA) framework links the difficulties in establishing intergovernmental agreements to the costs of coordinating an agreement, the division of mutual gains and required inputs, and difficulties in enforcing and monitoring the agreement to transaction costs (Feiock, 2007; Shrestha, Zhao, and Feiock, 2007). Limited information on the development goals of potential partners, uncertainty over future events and the expectations for project outcomes pose first order collective action problems. The decision to cooperate is influenced by contextual factors that drive local policy decisions in addition to larger regional characteristics that shape collective action situations. Community characteristics such as demographic heterogeneity, fiscal problems and the local political institution influence cooperative behavior (Steinacker, 2004). At the regional level, the geographic relationship among communities is an important predictor of intergovernmental cooperation (Post 2004).

Research on intergovernmental agreements among local governments indicates that the decision to cooperate and the selection of partners is not ad hoc and random but results from a calculated decision where one considers the costs of establishing an agreement and negotiates over individual and joint benefits (Feiock, 2004). In order for actors to cooperate with each other, information on who may be a good partner is critically important. Network relations improve information flow among actors and may act as a monitoring and sectioning mechanism. The more information one has of potential partners to form an agreement with, the probability of attempting a link increases (Ahn and Sholtz, 2004).
When two or more local governments decide to cooperate, they must agree on the distribution of benefits and the required inputs into the arrangement. Coordinating and specifying tasks requires ongoing communication and decisions (Gulati and Sing, 1998). The bargaining and negotiation process may be quite extensive (Ugboro, Obeng and Talley, 2001). Contracts, although incomplete, represent attempts to mitigate defection problems by ensuring compliance measures and specifying the joint benefits of the arrangement. Prior exchanges among local government units provides the basis to judge the reliability in upholding an agreement and maintaining the levels of inputs that may be needed to sustain an agreement and result in successful outcomes.

Trust, norms of reciprocity and network structures are often considered the core components of social capital (Putnam, 1995). These are important features of collective action and in reducing coordination, division and defection problems that pose barriers to cooperation (Ostrom, 1998). Agents of firms who trust one another, for example, have less concern about selection of partners and have lower coordination costs (Gulati and Singh, 1998). One of the key factors in cooperation among counties in the Tennessee Valley was the importance of building relationships and trust that lead to successful regional efforts (Lackey, Freshwater and Rupasingha, 2002). In the Detroit region, Indergaard (1998) finds that a lack of trust and reciprocity among local governments undermined a collective development agenda.

The theory of homophily predicts that when individuals have greater similarities they are more inclined to form network linkages within one another (McPherson, Smith-Love, and Cook, 2001; Monge and Contractor, 2003). Traditional homophily research on organizational demography has mainly focused on demographic characteristics and their relationship to individual and
interorganizational linkages. In a similar vain, Feiock (2007) links the similarities and differences among local government units to transactions costs. Collective action problems are minimized when communities have common attributes.

Monge and Contractor (2003) summarize two main lines of reasoning that support the theory of homophily, including Byrne's (1971) similarity-attraction hypothesis and Turner's (1987) theory of self-categorization. The similarity-attraction hypothesis predicts that people are more likely to interact with those with whom they share similar traits. Brass (1995a pg. 51) notes that “similarity is thought to ease communication, increase predictability of behavior, and foster trust and reciprocity” and McPherson et al. (2001 p. 415) simply suggest “similarity breeds connections.”

Based on this reasoning we can expect that similar economic and demographic characteristics among local governments influence the negotiation and bargaining process. Differences in bargaining power among local governments are associated with the time preferences of bargaining agents and the service needs of the community (Steinacker, 2004). The time needed to discuss and agree to the costs each government will share as well as the expected outputs from the agreement can be explained by the economic needs of residents and the structure of governing institutions. When communities diverge on economic conditions, government officials must devote more time to discussing the expectations for devoting resources to a joint effort and the possible returns given their economic situation.

Cities vary in their response to external pressures and the local context, such as the strength of non-profit organizations and neighborhood organizations, and the cultural factors arising from ethnic and racial identify of residents (Judd, 2000). In the Knoxville–Knox County, Tennessee, consolidation proposal of 1996 for example, there was support by the chamber of commerce and
community leaders. Opposition that stemmed from suburbanites who distrusted downtown business elites and feared becoming part of an urban community undermined the consolidation effort (Lyons and Sheib, 1998). The different development agendas of a sample of Councils of Government in Illinois described by Lindstrom (1998) reflect the similarity and differences of economic conditions of member governments. The managed growth agenda of economically stronger municipalities focuses on retaining existing businesses rather than actively seek new ones. The agenda of the older suburban communities, on the other hand, focuses on pursuing policies that would limit expansion into exurbia at the expense of their industrial base. Her analysis suggests that governments were cooperative in developing policies for their subregions because they had similar development positions.

Contextual differences among communities is linked to their position within the metropolitan area. For example, there is often an unequal distribution of public resources between older inner ring suburbs and outer ring suburbs (Powell, 2000). Inner ring suburbs have gradually begun to resemble central city areas with problems associated with housing, crime and abandoned commercial strips (Orfield, 1997). However, incentives of suburban government actors differ sharply from central city counterparts. The context of local institutions (e.g. electoral representation, form of government) and demographic attributes that define the demands on these institutions may be quite different among local governments (Ruhil et al.). Foster’s (1997) study of cooperation in the Buffalo metropolitan area suggests that a divergence in city attributes and cultural histories make it difficult for regionalism to take hold.

The demographic characteristics of communities also influence the costs of joint venture formation. Similar preferences of the median voter in partnering communities reduce division costs. Large constituent demands placed on elected officials require that benefits resulting from
joint development efforts be distributed to many interests. Where differences are smaller, officials
involved in establishing a joint development effort can more readily target benefits to common
constituent or interest groups.

The specificity of the asset is one of the strongest incentives for governments to cooperate (Post,
2004; Williamson, 1987). Asset specificity is the degree to which specialized investments are
required to produce the service. The transaction specific investments influence the type of
governance arrangement and also affect the time devoted to working out the details of an
agreement. Asset specificity of the cooperative effort is a way to account for the risk and flexibility
of local governments entering into different types of agreements and the extent to which local
governments negotiate over costs and expected benefits.

The opportunity to free ride on the benefits provided by others undermines organizing for
collective action. Based on Olson’s (1965) theoretical reasoning, as the size of a group increases
the share of benefits is reduced. Rather than participate, the incentive is for an individual to receive
the benefits without contributing. Highly diverse and fragmented regions pose collective action
problems, particularly for economic development where the benefits may be spread across a wide
region. However, when communities share a common geographic boundary, the costs of
transacting are minimized (Post, 2004). Mutual assurances that each government will not defect
and will contribute to the collective good are improved. The credibility of adjoining cities to
maintain their commitment is strengthened over repeated interactions so that fixed, geographic
boundaries have the effect of minimize shirking. In instances where communities are experiencing
significant growth, exchange of information and interaction increases. Large development projects
that result in spillovers into adjoining communities may necessitate inter-municipal coordination. Such repeated exchange builds trust on the actions of each community.

**Data and Method**

**Dependent Variables**

A mail survey is used to collect data on joint ventures for 425 local governments with a population of 10,000 or more in twelve metropolitan areas. A response rate of 48% was achieved representing 206 surveys. Of these completed surveys, 86 local governments have a joint venture with at least one government unit representing 90 institutional dyadic ties.

A challenge in estimating the appropriate empirical model is to avoid selecting only those local governments that have a joint venture. In the standard two-step Heckman model (1976), a probit model estimation procedure is used to obtain coefficients for the selection equation. The inverse Mills Ratio variable is calculated and included as an additional variable in the substantive equation to account for the selection bias. In this study, the selection equation is used to first estimate the probability of a local government establishing a joint venture. Survey respondents were asked to identify whether they had established a joint venture with another local government for economic development purposes. The dependent variable is measured dichotomously, where 1 represents the formation of joint venture and 0 is otherwise.

The dependent variable of the second equation is the time it takes to bargain and negotiate over the costs and benefits of the joint venture. Survey respondents were asked to identify on a 1 to 5 scale the amount of time it took to discuss the project costs and project benefits of the joint venture. The
response category for each question ranges from less than 20%, 20-40%, 40-60%, 60-80% and greater than 80%. These two questions were added to form an index ranging from 2 to 10.

**Independent Variables**

**Selection Equation**

Table 1 lists the independent variables and how each is measured. The first set of independent variables in the bottom half of the table are hypothesized to explain a local government forming a joint venture.

Consistent interactions help with predicting future behavior (Gulati, 1995; Ostrom, 1990; Mizzi, 1997). It provides more opportunities to identify potential benefits from establishing joint development agreements. Repeated interactions and exchanges also build trust and reliability which is important in collective action situations (Ostrom, 1998). The frequency of interaction between local governments is measured with the question “how frequently do you or personnel in your organization communicate with other local governments in the region to discuss issues of growth and development?” It is hypothesized that when local governments communicate with greater frequency it will increase the likelihood of a joint venture being established. Social capital is measured with two questions from the survey instrument. Respondents were asked to identify on a scale of 1-5 the extent to which there is trust among local governments in the region and the extent to which resources are exchanged to indicate reciprocity. The additive index ranges from 2 to 10 scale.
Coordination problems increase as the size of the group becomes large (Ostrom, 1998). Greater coordination problems are anticipated in metropolitan areas that are highly fragmented thus reducing the probability of cooperation. The fragmentation of the metropolitan area is measured as the number of local governments per 10,000 population. The size of the population is controlled for with population in 2000. The census region in which the local government is located is also controlled for and is measured dichotomously where northeast and midwest is 1 and south and west is 0.

Local political institutions can be an important factor in establishing a joint venture. Although low-powered incentives associated with the manager-council form of government reduce risks of opportunism, this institution is less responsive to citizen demands. Consistent with the argument that unreformed local government structures expose officials to political incentives to engage in visible development projects, I expect that mayor–council government will be positively related to joint venture formation (Feiock, Jeong and Kim, 2003). Local governments with a mayor for form of government are coded 1 and all others 0.

Table 1

**Outcome Equation**

The second set of independent variables listed in the top half of Table 1 are included to explain the time in discussing project costs and benefits of the joint venture. In the outcome stage of the two-step Heckman model, the unit of analysis shifts to the dyad.
There are two dominant traditions within structural analysis of organizational networks. The positional tradition views the network structure as a pattern of relations where positions and roles of participants determines who communicates with whom. The relational tradition, on the other hand, focuses on the communication between participants. The properties of communication between organizations include the amount of time, intensity, and frequency. When taken together it creates a structure that connects participants through communication patterns (Monge and Contractor, 2003).

Eisenberg et al. (1985) distinguishes between two levels of linkage. An institutional linkage occurs when information or materials are exchanged between organizations without the involvement of specific organizational roles or personalities (e.g. routine data transfers between banks for example). A representative linkage, on the other hand, occurs when an official representative of an organization has contact with a representative of another organization (e.g., an interagency committee to formulate joint policies). Survey respondents were asked to identify the local government that the joint venture was formed with and the properties of the exchange relation. This tie represents the institutional linkage.

Ties between actors at one point in time influence future exchanges (Gulati, 1995). A prior agreement, whether successful or not, provides additional information on the preferences of partners. Prior arrangements allow government officials to better assess partner trustworthiness and determine whether the partnering city will fulfill its obligations. Survey respondents were asked “prior to this joint venture, has your city established other agreements with these government units?” The response is measured as 1 for yes and 0 for otherwise. It is hypothesized that a
previous agreement reduces the amount of time it takes to negotiate and bargain over the costs and benefits of a joint venture agreement

A set of variables that indicate the extent to which partnering communities are similar in demographic and economic characteristics are included to test the homophily hypothesis. I expect that as communities diverge in characteristics, the bargaining and negotiation process takes longer and demands more attention. Absolute differences in per-capita income and percent white indicate greater heterogeneity between communities. A categorical variable is used to indicate if partnering communities are both increasing in population or are both decreasing in population. Local governments that have the same form of government are expected to have a negative relationship to the time spent discussing joint venture activities. This is measured dichotomously. The geographic relationship between communities is also expected to influence the time spent negotiating costs and benefits. Communities that share a boundary are coded 1 and 0 as otherwise. It is hypothesized that a shared geographic border will have a negative relationship to the outcome variable.

Problems of coordination, division and defection that make cooperation difficult depend heavily on the specificity of the asset (Williamson, 1981). The nature of the asset influences the type of governance arrangement that is established for its provision or procurement. Economic development policies vary in these characteristics and shape the collective action problem. I expect that depending on the policy focus of the joint venture, the discussion over costs and benefits changes. Survey research methods employed by Reese (1993, 1998) are used to identify the specific policy area that is the focus of the joint venture. In these studies survey respondents were asked to identify from a list of economic development policies those that the city used. This study
asked the survey respondent to identify the specific economic development activities that are the focus of the intergovernmental arrangement. Using similar scores to those constructed by Brown and Potaski (2003a, 2003b) for interlocal service agreements, survey respondents were also asked to rate on a scale of 1-5 the specificity of the economic development activity that is the focus of the joint venture. The scores were then averaged across each policy area.

Shrestha, Zhao and Feiock (2007) find an inverted “U” shaped relationship between asset specificity of service related goods to both the probability to cooperate and the associated levels of expenditure. They suggest that as assets become more customized market transactions give way to co-production. At a very high level, however, a greater degree of uncertainty over opportunistic behavior and limited information of future events lead cooperating units to reduce the amount of resources devoted to the cooperative agreement. I expect as the amount of expenditures increases the time associated with discussing costs and benefits will also increase. After a certain threshold, as communities find is less advantageous to devote larger resources to the agreement, I expect that negotiation over the costs and benefits will likewise decrease. To account for this relationship, the asset specificity score is squared.
Results
The results provide support for some elements of the homophily hypothesis and principles of institutional collective action. Table two lists the coefficients of the selection and outcome equations of the two-stage Heckman selection model. For the selection equation, all of the variables are significant and in the expected direction. Fragmentation is highly significant and negatively related to a community forming a joint venture. When there is a higher degree of social capital among communities a local government has a higher probability of forming a joint venture. Frequency of interaction also increases the likelihood that communities will cooperate for development purposes.

Table 2
This study is mainly concerned with identifying explanatory factors that reduce or increase the amount of time communities spend in negotiating the costs and benefits of the joint venture. Based on the homophily hypothesis, it is hypothesized that similar demographic and economic characteristics reduce the negotiation time. The results indicate that as the difference in per-capita income between communities becomes greater the amount of time partnering communities discusses costs and benefits increases. Greater difference in percent white between communities, however, has a negative relationship to discussing costs and benefits. It is hypothesized that two partnering communities with the same political institutional arrangement will reduce the time needed to discuss the joint venture costs and benefits. The results provide support for this expected relationship.

The results also indicate that when communities have established a prior arrangement, it reduces the time in negotiating the joint venture activities. This is as expected, since prior arrangements
between local governments reduces uncertainty and information asymmetries. Controlling for the other variables, when partnering communities share a geographic border, negotiation time increases. This variable is not significant however.

Local governments establish a governance mechanism that minimizes the costs of transacting. Asset specificity is one common transaction characteristic of a service that influences the shape of governing arrangements (Williamson 1981). The nature of the asset is particularly important in predicting the amount of time in negotiating and bargaining over project costs and benefits. This variable is significant and in the expected directions. As the specificity of the asset becomes higher, it has a positive effect on discussing the joint venture, but the amount of discussion on the joint venture decreases as the nature of the asset becomes highly specific. This is consistent with research on interlocal service agreements (Shrestha, Zhao, and Feiock, 2007).

Discussion

Economic development policy adoption has historically been characterized as a function of competition between local governments and has been the focus of much research in the urban planning and the public administration disciplines. Local officials often react to development competition by neighboring cities by providing financial incentives to businesses as a counter offer (Bowman, 1988). The mobility of capital reinforces this sense of competition. Even in this environment, recent studies indicate voluntary joint ventures are more prevalent than previously thought (Feiock, Steinacker, and Park, 2007; Johnson and Neiman, 2004; Agranoff and McGuire, 2003). For example, some research has found that even as local governments are competing they voluntarily work with other local governments through regional partnerships and metropolitan
wide organizations (Olberding, 2002; Lindstrom, 1998). Goetz and Kayser (1993) found that many cities in the Minneapolis region have not only considered but also carried out cooperative development with another municipality. Despite these findings we have little empirical evidence with which to explain why cities do or do not cooperate and important factors that underlie the bargaining and negotiation process.

The purpose of this paper to identify factors that reduces or increases the time of negotiating the costs and benefits of an intergovernmental agreement for development purposes. Rather than focus on a descriptive account of local governments this study focuses attention on the relational ties between cooperating communities. The tie between government units captures properties of the relations that cannot be measured by aggregating the attributes of the communities. It focuses not only on the communities that are the partners of the joint venture but explores the similarities and differences among them, a history of cooperative efforts, and the policy focus of the joint venture to explain the time it takes for communities to negotiate project costs and benefits.

To test hypotheses of institutional collective action, I use a two-step model that incorporates contextual factors such as metropolitan characteristics and intergovernmental relations among communities to first predict why a community decides to form a joint venture. The findings from this stage of the analysis indicates that although it is difficult for cooperation to proceed, the opportunities for forming joint ventures are related to the amount of social capital among local government units. Consistent with the theoretical underpinning provided by Olson (1965) who argues that larger group size makes collective action more difficult, fragmentation is found to negatively influence joint venture formation.
Of particular significance to cooperation are the information asymmetries among local
governments, particularly when there is uncertainty on whether the joint development will be
successful and the presence of possible defection of partnering communities. Knowing potential
partners helps reduce uncertainty. Research by game theorists, for example, suggests that
cooperation should be easier when players are engaged in repeated games. The findings of this
research support Ostrom’s (1990) recommendation that to address social dilemmas and support
cooperation individuals should communicate with more frequency.

The second part of the analysis focuses on the length of time it takes to negotiate the costs and
benefits of an agreement. A local government’s political institution and socio-demographic
characteristics influence the establishment and nature of voluntary agreements (Feiock, 2004).
Transaction costs are linked to not only the attributes of communities, but also the extent to which
these attributes are similar across communities. The homophily hypothesis suggests that
similarities across individuals will reduce communication problems. In the context of local
government units, the results indicate that common characteristics will make it easier for
communities to agree upon a set of rules and spend less time discussing the costs and benefits of
the agreement. Furthermore, the difficulty in coordinating an agreement will be reduced when the
form of government is the same between partnering communities.

Collective action problems vary depending on the extent to which specialized investments are
needed and the ease in monitoring the outputs and performance of the agreement. The negotiation
costs are linked to the flexibility and adaptability of the joint venture and the risks associated with
policies that require significant investments. To account for this, I hypothesized that the time needed to discuss joint venture activities is influenced by the nature of the asset and that the relationship is non-linear.

Highly specific assets, which may not be transferable to other policy areas, reduce the flexibility of a local government to adapt and change the service in order to address other community issues. This may have the effect of reducing the amount of time a government official spends on negotiating and bargaining over future costs and benefits. For assets that are relatively low or only modestly specific, the benefits that may accrue from jointly investing in a project may be widely distributed or have effects that are unintended. Officials, therefore, may need to engage in more discussion on the investments that will be made and for what purposes.

Local governments can effectively organize for collective action when the benefits are high and transaction costs are low. Relational networks can influence transaction costs in a number of ways. Over time repeated interaction between local governments builds up social capital. Trust among local governments in the region facilitates cooperative behavior. When information on the conduct and actions of local government units is shared across the region, information asymmetries are reduced and problems of coordination are overcome. The joint benefits of cooperating with certain potential partners can be more readily identified.

The resultant informal relational networks influence transaction costs by providing information on who is a good partner. Credible commitments and reducing possible defection of one of the participants improves the likelihood that cooperation will be successful. Local governments become more trusting of potential partners to uphold an agreement. Based on this logic there is an incentive for communities to acquire a reputation for upholding agreements in order to receive
individual benefits from cooperating in the future. Understanding the formation and negotiation process of the bilateral agreements that are the focus of this study is important for understanding the emergence of these larger regional governing dynamics.

The results reported in this study demonstrate that key features of emerging bilateral joint ventures and a network of interlocal agreements are the institutional and contextual features of partnering local governments. The preferences of local actors who negotiate over costs and benefits of interlocal agreements are constrained by the economic and demographic makeup of the community’s residents. Divergence in preferences among cooperating cities has the dual effect of prolonging and shorting negotiation time.

Given that local governments continue to compete for development, the length of time that costs and benefits need to be discussed and rules for governing the agreement worked out may have the undesirable effect of government units loosing out on future development projects. Quick responses to rapidly changing regional economies and opportunities for capturing highly mobile capital require that local governments frequently communicate on critical regional development issues. When local governments share a geographic border, coordinating development becomes critically important, however, the similarities and differences among governments that affect the time spent negotiating over costs and benefits may facilitate or hinder opportunities to create individual and joint benefits quickly.
References


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Table 2: Regression Results

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Number of obs       = 193  
Censored obs        = 120  
Uncensored obs      = 73   
Wald chi2(10)       = 25.13  
Prob > chi2          = 0.0051  
Mills lambda        = -.368  
Rho                  = -0.235
Significance levels:
*.10  **.05  ***.01
† reference category - population changes
are in different directions

Notes
Intergovernmental cooperative arrangements are conceptualized as joint ventures. The term joint venture has been used by Feiock, Steinacker, & Park, (2007), Johnson & Neiman, (2004), and Goetz and Keyes (1993). A definition and examples of joint ventures was provided.

The reference category is partnering communities that have population changes in opposite directions.