

Chapter 10

Institutional Collective Action and Local Government Collaboration **Richard C. Feiock**

The delivery of community services in metropolitan areas is often coordinated through networks (Provan and Milward 2001). Collaborative networks for provision of public service are often imposed by statute and are designed and created by a hierarchical coordinating agency. Thus network managers are responsible for the structure and maintenance of an integrated network among decentralized units.

In this chapter we instead focus on intergovernmental relationships that are more voluntary and self-organizing in nature, such as voluntary service agreements among local government units to coordinate or jointly provide services. Of particular interest are collaborative institutions in which the agencies or jurisdictions involved are able to enter or exit agreements and craft customized conditions without special review by a single superior coordinating agency.

The development of voluntary coordination mechanisms is particularly salient for metropolitan areas where the problems of fragmentation are frequently most pronounced and the institutional complexity makes the imposition of standardized solutions difficult. U.S. metropolitan areas are characterized by fragmentation of service responsibilities across a multitude of municipal and county governments, specialized agencies, and districts. Decisions of one government or agency impose costs on others. In this context, interlocal agreements and partnerships provide self-organizing governance mechanisms to reduce service costs and increase benefits through collaboration.

Can voluntary collaborations among local governments provide solutions to the regional problems confronting metropolitan areas? Much of the literature in planning and public administration assumes that governmental fragmentation precludes concerted responses to interjurisdictional problems (Downs 1994; Katz 2000). The implication is that local units of government will be incapable of dealing with spillover problems that result when the policy choices in one community impose costs on others (Lowery 2001; Olberding 2002). Practice has proven these assumptions wrong. Cooperation among local governments is common in many service areas (Friesema 1979; Feiock 2007). Local governments share information and jointly respond to emergencies as well as deliver routine services (Agranoff and McGuire 2003).

Collaborations through consolidation of functions provide a decentralized regionalism comprised of networks of horizontal interlocal agreements, functionally and geographically defined overlays of nested service units (Parks and Oakerson, 1989; Feiock and Carr 2001; Thurmaier and Wood 2004).

What are the strengths, possibilities and limitations of voluntary exchanges and agreements among independent authorities created to resolve specific sets of externalities and interdependencies? Can we learn better design principles for statutorily imposed coordination institutions by observing the structures that emerge as authorities negotiate customized solutions to their problems? Alternatively, can we uncover policy principles that can be used to increase the likelihood that voluntary solutions will emerge and improve the performance of self-emerging structures? This chapter provides conceptual tools to begin to answer these questions by combining elements of collective action, transaction cost and social exchange theories within the institutional collective action framework to explain how voluntary arrangements arise and evolve over time to address multi-jurisdictional or regional problems.

The next section outlines the interests that motivate interlocal collaboration and argues that voluntary agreements emerge from a dynamic political contracting process. Bilateral contracting and multilateral collective action are mechanisms by which two or more governments act collectively to capture the gains from providing or producing services across a larger area. Creation of these institutional mechanisms presents a problem of “institutional collective action” (ICA) for local units (Feiock 2004, 2007). ICA focuses on how local government officials perceive and weigh the various costs and benefits of joint action as they contemplate interlocal service agreements and other forms of intergovernmental collaboration. Although service collaborations can produce substantial benefits, local officials often perceive the costs of attaining those benefits exceed potential gains. How officials understand these costs will depend on the context of the decision setting, including the characteristics of the good or service being considered, the configurations of political institutions under which they operate, and the networks of existing relationships among local government officials.

We elaborate the ICA framework by identifying how specific community characteristics and formal and informal institutional arrangements reduce transaction costs of information/coordination, negotiation, enforcement, and agency. After reviewing evidence from

ongoing empirical analyses of interlocal collaboration, we discuss the implications institutional collective action for collaboration and regional governance.

The Benefits and Costs of Voluntary Service Collaboration

Mechanisms for voluntary collaboration take many form including adaptive or restrictive interlocal agreements, intergovernmental contracts, regional councils, and partnerships. While voluntary agreements among local governments may need statutory support from higher level governments they are not designed or mandated by a single central authority. Instead these mechanisms rely on the voluntary choices of local units to participate. Intergovernmental collaboration can produce both collective and selective benefit for individual government units. Collaborative agreements generate collective benefit by producing efficiencies and economies of scale in the provision and production of services and internalizing spillover problems. They also generate selective benefits if they advance the individual interests of local government officials.

A decentralized system of governments enhances allocative efficiency if it produces a match between community preferences for quantities and qualities of a services and actual service choices and resource allocations; but it can also result in diseconomies of scale in service production and inter-jurisdictional externalities. Economies of scale result when average cost declines as output increases. Fragmented governments are constrained by their size if there are not enough citizen consumers in a jurisdiction to produce a service at minimum cost. For this reason, economies of scale are often cited as the impetus for interlocal agreements (Bish 2000; Post 2002).

Controlling negative externalities imposed by one jurisdiction on others, such as storm water flooding, incompatible land uses and crime risks can produce joint gains. Reducing negative or increasing positive externalities can create strong incentives for local leaders to cooperate.

Selective incentives can also motivate collaboration. Individual career incentives influence the wiliness of local leaders to enter into collaborative arrangements. Stein (1990) and McCabe et al. (2008) argue that city managers often act “as if” they were residual claimants who can and do capture a portion of the benefits of local government activity, particularly when those activities produce efficiency gains and economic growth. City managers can use the tangible success represented by service efficiencies to advance their careers, usually by finding better

paying positions in larger and wealthier communities. Recent work argues that the professional standing and employment opportunities of city managers are improved by collaborative service innovations (Feiock 2004; Carr and LeRoux 2005).

Political ambition among elected and non-elected officials operates to both enhance and impede collective action among governments in metropolitan areas (Feiock 2007). Political ambitions to develop electoral constituencies or advance to regional or statewide office can lead local officials to address interlocal problems even in the face of weak citizen demand (Gillette 2000).

Elected officials are primarily responsive to their internal electoral constituencies, but to the extent that interlocal policies influence residential location decisions, they have implications for future constituencies. Bickers (2005) suggests that interlocal cooperation might result from the efforts of local officials seeking to prevent the dilution of the voter groups on whom they rely for electoral support. Collaboration produces political costs as well. Local governments may need to give up some authority to achieve regional coordination. Furthermore, local officials who pursue collaborative solutions that are contrary to their constituents' preferences or prejudices risk being punished at the polls (Gerber and Gibson 2005, 12).

Barriers to Interlocal Collaboration

If the structure of the problem situation is positive sum, the Coase Theorem (1960) maintains that bargaining can produce welfare maximizing solutions. In practice, the feasibility of self-organized solutions is greatly limited by the transaction costs of bargaining. The necessary condition for any agreement is an increase in benefits, and the larger that gain, the more likely it will outweigh the transaction costs necessary to achieve it (Libecap 1989; Ostrom 1990; Lubell et al. 2002). Transaction costs from four sources need to be kept low in order for benefits to exceed the costs of collective action (Feiock 2007; Feiock, Steinacker, and Park 2008).

1. Information Costs-information on the preferences of all participants over possible outcomes and on their resources should be common knowledge.

Information problems include both incomplete information for all participants and differences in information levels across the participants. Incomplete information may prevent organizations from recognizing the potential gains from joint action. The information asymmetry may also impede recognition of desirable joint outcomes, and it can increase concerns about the

motivations or trustworthiness of potential partners as each seeks to gain a strategic advantage by concealing information.

The number of governmental units in a metropolitan area, their economic, political and demographic composition, and their spatial dispersion affect information costs. Economic and demographic homogeneity that indicate potential common interests and service preferences both across and within jurisdictions reduce information costs. Similar interests reduce the range of desired bargaining outcomes, lowering both information and bargaining costs (Libecap 1989; Lubell et al. 2002).

On the other hand, a large number of potential participants to an agreement, and greater distance between them, make communication more costly. Difficulties in gathering reliable information about preferences and resources increase with the number of governments and the distances between them (Feiock 2007; Post 2002).

When information is imperfect and resources limited, finding partners in a trial-and-error fashion will be inefficient. Thus, information barriers prevent governments from recognizing potential gains from joint action, especially when measurement of outcomes, and thus potential payoffs, are difficult or costly to measure (Williamson 1985).

2. Agency Costs-bargaining agents must accurately represent the interests of their constituents.

Agency problems complicate the calculus of cooperation because the public officials that negotiate cooperative agreements are themselves agents. Principal-agent problems arise because the preferences of public officials negotiating interlocal agreements may depart from the preferences of citizens they represent (Feiock 2002). Principals and agents may differ in their preferred outcomes, the timing of the outcomes, or their attitudes toward risk. The greater these differences the less likely that a cooperative agreement acceptable to both can be created.

Demographic homogeneity within a city reduces agency problems for officials negotiating interlocal agreements on behalf of citizens. Similarity among constituents provides greater certainty in the principal's desired outcome, making the agent's task easier. The extent to which agency problems are manifest has been linked to the structure and powers of public offices as well as the political security of those who hold them. Strong institutions and long tenure in office increase the value local officials place on cooperative projects (Park and Feiock 2007).

3. Negotiation/Division Costs—the resource costs associated with the process of negotiating an agreement must be small and the parties must be able to agree to a division of the bargaining surplus.

Even fully informed officials pursuing their constituent's interests will find achieving agreement on the allocation of costs or benefits difficult. Joint gains may exist that would improve the position of all participants, and yet no agreement will be reached if they cannot settle how to divide the gains. Negotiation of an acceptable distribution of benefits will be affected by asymmetries in preferences and political strengths between actors (Heckathorn and Maser 1987). Political opposition to a cooperative solution may result when participants are heterogeneous and it is clear which party benefits most.

Division problems tend to be less problematic when parties are similar. With large disparities in bargaining power, the stronger partner is more likely to push for the bulk of the gains from cooperation. The weaker partner then has little incentive to participate and may walk away from the agreement. If weaker partners push to receive a fraction of the gains disproportionate to their bargaining strength in the mistaken belief that they are critical to the endeavor, no mutually acceptable split of the joint gains may be possible. With similar agencies or governments, the 'fair' division of equally splitting the gains is likely to be a focal point of negotiations, increasing the probability that a deal acceptable to all can be reached.

4. Enforcement Costs—there can be at most low costs associated with monitoring and enforcing the agreement.

Enforcement will be costly unless there are credible commitments by the contracting parties to not defect. Although enforcement problems occur at implementation, the anticipation of enforcement problems adds costs to the process of developing institutions. If jurisdictions are tempted to renege, there is less incentive to reach agreement in the first place. Enforcement costs are reduced when the parties have an ability to make credible commitments to each other over time. For example, close geographic proximity and interactions on a variety of issues over long periods of time can reduce commitment costs.

Overcoming Collective Action Problems

For bilateral intergovernmental agreements a prisoner's dilemma situation is inexorable for a single interaction (single-shot PD game). If the same interactions are indefinitely repeated, each

player can reward or punish past moves of the other actor. If this endogenous sanctioning is employed in “tit for tat” strategies, rewarding cooperation with cooperation and defection with defection, stable cooperation can be achieved in an iterated prisoner’s dilemma (Axelrod 1984).

The tit for tat solution does not directly apply to multilateral agreements (n-person games) because of the collective action problem (Olson 1965). Free riding is the dominant strategy for each actor and punishment can not be easily targeted against the offending player. In an n-player non-cooperative game, repeated play is insufficient to resolve the dilemma. Instead, the solution to the first-order problems require agreement on structures and processes of interaction that permit the adoption and enforcement of collectively binding decisions (Ostrom 1990; Ostrom, Gardner, and Walker 1994).

The examples of interlocal cooperation efforts referenced in this chapter were successful because local governments overcame transaction cost barriers to cooperation and craft mutually beneficial accords. What these examples share is a configuration of service types, community contexts, political institutions, and network relationships that reduced the transaction costs described above. The next section more specifically links these four contextual considerations to the transaction costs problems discussed above in order to identify how they impede or facilitate the emergence of voluntary mechanisms for intergovernmental collaboration.

Characteristics of Goods and Service Types

Transaction costs can be great when a relationship involves transaction specific assets or the qualities of a service are difficult to define and measure. For Williamson (1985) asset specificity—transaction specific durable investments that can not easily be redeployed to other uses— is central to choosing among governance structures. When parties make mutual investments of specific assets it creates mutual dependence. If an agreement requires governments to make investments in specific assets or other long-term commitments, it can alter the options that would be available to them if the agreement broke down in the future (Frieden 1994).

For physical assets that are subject to congestion, such as shared use of a central library or water treatment facility, both the party that provides it and the parties that contract for it are exposed to risk. The party providing the asset must make an investment greater than that necessary to cover its own needs, leaving it vulnerable to excessive costs if other participants later renege on the contract. At the same time if demand for the service increases, the

government providing the good may prefer to terminate the interlocal compact in order to better serve its own citizens. The other participants are then forced to make an unplanned investment to develop their own asset.

Measurement difficulties increase search costs and make coordination of joint action difficult. Effective monitoring requires quantitative measures of outcomes or appropriate level of activity by a service provider, but metering or monitoring the quantity and/or quality of output or benefits of a service can be difficult and costly (Williamson 1985). Services such as sewer, water, or refuse collection that have divisible easily measured outcomes thus costs can be allocated based on the benefits received, and beneficiaries' preference is invariant (Steinacker 2004). For services with non-tangible outputs or complex production processes, developing cooperative agreements is more difficult.

Characteristics of Communities

Demographic homogeneity among communities reduces the likelihood of political and economic power asymmetries that advantage one of the parties and create problems for negotiating fair divisions of benefits. Neighboring jurisdictions that are similarly situated begin from a position mutual dependence. Scarpf (1997, 140) argues that mutual dependence can be represented as a battle of the sexes game in which both players have an interest in concluding the deal but have differences in preference for one or the other coordinated outcome. In this situation both players could achieve their second-best outcome. Since non agreement would lead to the worst outcomes for each, threats to break off negotiation would not be credible. If instead power is asymmetrically distributed, the player in an advantaged position can capture all of the benefits or no deal will be struck. Social and economic homogeneity places cities in similar bargaining positions and thus makes an equal sharing of costs a workable solution.

Homogeneity within, not just between, units is important because agency costs for officials negotiating interlocal agreements on behalf of citizens are reduced. Not only are interests likely to be less uniform, it is more difficult to aggregate preferences and hold agents accountable in heterogeneous communities. Thus we expect intra-jurisdictional homogeneity increases the likelihood of cooperation.

Neighbors can often gain production scale economies from sharing services. Additionally, fixed borders ensure repeat play among neighbors that creates interdependencies.

Governments with common borders are not stuck in a one-shot prisoner's dilemma because the impossibility of exit means defection from cooperation exposes the defector to future retaliation. The prospect of future play with the same party constrains opportunism by giving each government an incentive to cooperate if there are mutual assurances that each government will contribute to the provision of the collective good (Miller 1992).

Political Institutions

The provisions of state constitutions and enabling legislation vary, but most allow jurisdictions to undertake jointly any activity they can undertake individually (ICMA 1997). Nested within the state institutional framework, local political institutions shape the information available and the structure of incentives faced by government officials. Administrators and elected officials each play a role in forging collaborative alliances with other governments but they differ in bargaining resources and institutional positions. Political system institutions such as council-manager government and provisions for direct democracy have been demonstrated to constrain risks of opportunistic behavior by both elected and appointed leaders (Feiock 2004).

The city council functions as 'veto player' (Tsebelis 2002) in the political system since council approval typically is necessary to ratify intergovernmental agreements. A council elected at-large is more likely to share the preferences of the executive, while councils with district-based representation advocate the interests of the smaller geographic constituencies they represent (Clingermayer and Feiock 2001). Gerber and Gibson (2005) argue that the underlying political dilemma associated with regional governance is that local officials need to give up some authority to achieve regional coordination but they may then be held accountable for regional policies that are contrary to the preferences of their local constituents. Even if there are regional or city-wide benefits from collaboration, district representatives may be unwilling to delegate control of decisions about the scope and location of projects if it has the effect of reducing their ability to direct benefits to district constituencies.

Turnover and short election cycles result in local officials adopting a myopic perspective that makes cooperation difficult (Clingermayer and Feiock 2001). When political institutions create longer time horizons, short-term defection gains will be outweighed by gains from continued cooperation. Extended tenure in office for elected and administrative officials reduces

policy uncertainty and promotes decisions based on longer-term considerations of the collective and selective benefits of collaboration.

Institutional homogeneity, the similarity of political institutions across government units in a region, facilitates exchange because actors tend to cluster with others of similar values, norms and beliefs characteristics (Carley 1991). Much of the local public administration literature suggests that professional city managers share a common set training, experience and orientation that lead to common values and an emphasis on efficiency and professionalization that are reinforced by the professional organizations in the field (Frederickson, Johnson, and Wood 2004).

The Structure of Policy Networks

An interlocal agreement between two local government units constitutes a dyadic relationship. If each unit also participates in other agreements with other local governments, together, these relations form a macro-level regional governance structure that comprises a set of actors in a social network (see Thurmaier and Wood 2002). Over time, embedded relationships with other local governments accumulate into a regional network that invests the reputation and reciprocity of information in the reliability and competencies of prospective partners (Gulati and Gargiulo 1999).

The existing structure of agreements among local governments reduces transaction problems by increasing information about each other's conduct specified in the agreements and enhancing the credibility of commitments to fulfill their obligations under the agreements. Interlocal agreements provide information about local governments' policies and programs and potential implementation problems. In this way a network of contractual arrangements transforms interlocal relations into repeated games in which a reputation for reciprocity and trustworthiness can mitigate opportunism.

Scholz and Feiock (2007) describe two roles that networks play in reducing the transaction costs of collaboration. First, boundary spanning or weak-tie networks offer solutions to search/coordination problems. Second, strong-tie or reciprocating structures make trust and credible commitment possible.

Information on opportunities for cooperation and who may be a good partner are necessary for local government units to cooperate. The value of a link between government units

is particularly high if it creates a “bridge” to a government with connections to organizations and governments not part of the first unit’s network (Burt 2005; Berardo and Scholz 2005).

Individual actors need to be able to assess the probability that their contributions to a collective good will be efficacious in securing production of that good and be able to coordinate expectations of contributions with others. Information-bridging allows local governments to investigate a broader set of possible gains from other local governments and to reap the advantage of innovation not available within a more highly clustered network. This idea builds on Burt’s theory of “structural holes” which argues that ties that bridge structural holes enhance information flow and reduces coordination costs.

Because participants have incentives to free ride or to defect from cooperative agreements, overcoming enforcement problems is a central design issue for cooperative institutions. Strong-tie or reciprocating structures create disincentives for shirking or defection because a strong-tie network reduces the cost of monitoring and enforcing compliance with the terms of agreements. Partners gain information on the efforts, contributions, and behaviors of others that can be used for collective sanctions. Thus, a highly clustered network has the ability to impose constraints on local units that might attempt to shirk or act opportunistically.

Strong-tie intergovernmental relationships have been demonstrated to increase mutual trust and conformance to the provisions of an agreement (Lubell 2007). In a repeated relationship, such as occurs with geographically fixed government units, each actor stands to benefit by acquiring and preserving a positive reputation. In uncertain real world situations, reputation does more than compensate for incomplete information, it is a valuable social capital asset (Dixit 1996).

A history of cooperation among dyads or small groups of local governments builds reciprocity norms that reduce the costs of joint action and build social capital. Repeated small group interactions reduce the effort required to put additional new activities in place as partners develop trust and comfort working together over time (Feiock 2007; Lubell 2007). Reciprocal relationships also provide the opportunity for “side payments” if they link agreements across issue areas. In such relationships, the costs of knowing how counterparts may behave are reduced, since the establishment of a link running in both directions presupposes wider access to information on what type of behavior is expected and the political and social norms regarding the fairness of divisions.

A Research Agenda

Given the transaction costs inherent in crafting collaborative agreements, it is not surprising that much of the literature assumes centralization of authority and consolidation is necessary for effective action. Certainly there are situations where transaction costs exceed the benefits of cooperation, and thus centralized approaches to regional problems may be necessary. Nevertheless, a long history of empirical work reveals that voluntary regional governance arrangements are quite common (c.f. Parks and Oakerson's (1993) studies of service arrangements the Pittsburgh and St. Louis areas). Consistent with the predictions of ICA, this work reports that collaborative governance arrangements emerge when contexts and institutional configurations reduce the transaction costs of cooperation for local actors.

The Program in Local Governance at Florida State University's Devoe Moore Center supports a research program to systematically test institutional collective action explanations for the emergence of voluntary service collaborations among local governments in metropolitan areas. Ongoing work investigates elements of ICA at several levels of analysis: metropolitan areas or other regional units, cities or other local government units, and individual service agreement ties between government units.

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Table 10.1 provides an overview of ongoing research. While several projects are in their initial phases, the first five have produced research products. The evidence accumulated to date provides strong support for ICA explanations of collaboration. The work of Manoj Sherstha (Sherstha 2005; Shersta and Feiock 2005, 2006) focuses specifically on the propositions regarding the relationships between service types and the structure of collaborations. His first project examines interlocal expenditures for eleven different services that vary in terms of asset specificity and measurement difficulty. This analysis also includes the history of service collaboration for each city. The results reveal that the transaction characteristics of goods influence city choices of whether or not to collaborate—the first stage of the collaborative decision process. This is consistent with the basic transaction cost predictions that actors choose discrete governance mechanisms in a transaction cost minimizing way (Williamson 1991).

At the second stage, levels of collaboration, as indicated by the interlocal service expenditure efforts, were not influenced by the type of good. Instead collaboration effort was

linked to a history or reciprocal dyadic relationships. Once cities are engaged in collaboration, their level of effort depended on their past dealings—which shape social trust (Sherstha and Feiock 2006). The importance of service types is confirmed at a more micro level in Sherstha's dissertation research on service agreements in one metropolitan region over time. This evidence indicates that the evolution of collaborative networks is shaped by interactions between service type and network structure.

A second completed project investigates the conditions under which economic development collaborations emerge. The empirical analysis, which is based on a survey of local development officials, provides strong support for several of the propositions advanced here (Feiock, Steinacker and Park 2008). Certain city attributes reduced problems with division, agency, and information costs to facilitate development collaboration. Having more direct neighbors results in interdependencies that safeguard cooperative action and provided a larger opportunity set of reliable partners from which to develop joint ventures.

Economic homogeneity created similar bargaining positions and reduced bargaining conflicts. Internal homogeneity in economic development preferences was found to reduce principal-agent conflict for a city's chief executive, enabling her to pursue a wider range of collaborative economic development activities. Finally, the mayor-council form of government increased the likelihood of collaborations for economic development.

Both strong-tie networks of frequent interaction among cities and participation in weak-tie associational networks increased development collaboration. One implication of these results is that creating occasions for local officials to interact can build the networks and social capital that lead to cooperative solutions. Even membership in a regional association, a weak-tie relationship, was found to enhance the likelihood of partnership activity. This suggests that informal network structures may be effective in generating cooperative benefits in the future.

These analyses confirm that both the attributes of actors and relations among them need to be accounted for in explanations of how and why they decide to collaborate. The empirical results demonstrate that both characteristics of a local government unit and its position in a social network of local actors influence the likelihood of joint ventures. Thus interlocal policy collaborations provide a realistic alternative to address policy externalities. Even in competitive policy arenas like economic development, voluntary agreements can emerge from a dynamic political contracting process among local government units.

Modeling Collaboration

Applications of social network analysis to collaboration have provided interesting insight, but this work has been more descriptive than analytical in its approach. One purpose of the Program in Local Governance is to advance a more analytical approach to the investigation of formal and informal collaborative governance mechanism. Networks can be statistically modeled. The relevant network analytic techniques include Markov Chain Monte Carlo estimation techniques applied to exponential random graphs. These techniques fully control for interdependencies of observations. These interdependencies are common in network data, but violate the assumptions of regression analysis. Several ongoing projects statistically test hypotheses about what contexts that lead to the emergence and evolution of collaborative networks using the SIENA (Simulation Investigation for Empirical Network Analysis), a newly-developed network analysis software incorporating the latest advances in MCMC models (Snijders, Steglich, Schweinberger and Huisman 2005). The models of network evolution are based on an actor-oriented model in which local actors evaluate current network configurations and make or terminate agreements to maximize their implicit “utility function” denoted by

$$f_i(\mathbf{x}), \quad (1)$$

Where f is a parameter vector and \mathbf{x} represents a particular configuration of the network of which actor i is a member in the family X of all possible network configurations. When an actor i has the opportunity to create a new link or terminate an existing link, she will do it in such a way that this utility function (1) will be maximized. The network utility function of our actors can include a parameter vector containing both structural properties of the network and the actor attributes defined by the ICA framework. The network and behavioral utility function are estimated using the method of moments implemented as a continuous-time MCMC simulation in three stages. The first of these phases calculates likely starting values for the parameters of all the variables included in the model. Phase two simulates the choice process based on the starting values, compares the resultant simulated network with the observed second period network and adjusts values to reduce differences between the observed and the simulated data. The third and last phase uses a number of simulations to determine the frequency distribution of predictions, which then are used to calculate standard errors for the final parameter estimates (Berado and

Scholz 2005, 18). This approach allows us to apply statistical tests for whether any model parameter is significantly different from zero given other parameter values.

Conclusion

Institutional collective action explanations focus attention on both service and transaction costs of collaboration. Transaction costs are reduced by formal and informal institutional arrangements that increase the availability of information, reinforce social capital and reduce the transaction costs of negotiating, monitoring, and enforcing an agreement.

This approach allows us to investigate collaborations among specialized and fragmented governmental units in relation to the network structures in which they are embedded. It also allows predictions to be made based on both the extant structure of network relationships and the characteristics of units simultaneously. We can then test hypotheses about the emergence of ties among members and the evolution of collaboration over time. Our research program has developed unique concepts, measures and analytic techniques for analyzing relational linkages in longitudinal network data sets. To date, this approach has been applied to public safety and emergency response networks (Andrew 2005, 2007), environmental projects in the Tampa Bay area (Bernanrdo and Scholz 2005), and multiple services in Pinellas County Florida (Shrestha and Feiock 2006). Instead of examining various components of institutional collective action separately, these projects empirically examine the influence of service types, community characteristics, political institutions, and network structures together.

The institutional collective action framework also directs attention to the dynamics of decentralized systems of governance. One limitation in studies of collective action, transaction costs, and networks alike is their focus on comparative analysis of different institutional structures and relative ignorance of the dynamics by which the institutional structure emerges (Scholz and Feiock 2007). This is particularly problematic for the common situation in which multiple equilibria are possible. The relative likelihood of any given equilibrium can be determined by the process of institutional development.

As collaborations continue to provide benefits to participants, the parties to these exchanges build reputations for being trustworthy, providing in the process a feedback mechanism that enhances future cooperation and collective action. Most governance theories assume fixed preferences in order to emphasize the alteration of outcomes induced for the same

preferences by different institutional arrangements. Yet frequently it is changes in problem definition that induce changes in institutions and in policy outcomes.

Finally, analyzing the development of trust and group formation illustrate another means of understanding the dynamics involved in institutional development. Trust can be viewed as a secondary decisionmaking preference that can enhance the likelihood of pareto-superior outcomes. That is, the development of trust is the equivalent of the development of a formal second-order institution to resolve the underlying collective action problem. Analyses of how trust develops therefore provide one approach for understanding the dynamics of institutional development. The study of how these endogenous mechanisms operate deserves greater theoretical and empirical attention.

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Table 10.1: Ongoing Research on Collaboration and Institutional Collective Action

Principal Investigators	Collaboration Setting Sample/Population	Units of Analysis	Analysis Technique
1. Feiock Steinacker & Park	economic development joint ventures	surveyed cities > 50K pop	probit
2. Shrestha Feiock & Zhao	interlocal service expenditures	Georgia cities	Heckman/HLM
3. Scholz & Berardo	water projects in Tampa Bay estuary	network links among stakeholders	SIENA
4. Park & Feiock	regional economic development partnerships	metropolitan areas	probit
5. Andrew*	various types of public safety ILAs in FL	cities, agreements	SIENA
6. Ramirez*	networks among land use actors in Leon County	building permit applications	OLS
7. Shrestha*	25 years of ILAs in Pinellas County	service/agreement	SIENA
8. Feiock Park Lee & Lee	network survey of collaborations Orlando/Tampa	collaborative ties among cities	SIENA
9. Kwon*	ILAs among cities within COGs, RPCs and MPOs	Florida cities	SIENA
10. Berardo Feiock and Lubell	developments of regional impact (DRI) in FL	Florida cities	probit/SIENA
11. Farmer*	regional special purpose districts	counties	probit
12. Hawkins*	economic development joint ventures	cities in 12 metro areas	HLM
13. Scholz and Feiock	land use, development and water management	cities in three metro areas	SIENA
14. Carr, Shrestha & LaRoux	intergovernmental service agreements	cities in Michigan	Heckman/Probit

Additional information on these project is available at http://www.fsu.edu/~localgov/research_projects/regional_governance.htm

* dissertation research