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COLLABORATIVE APPROACH TO ECONOMIC DEVELOPMENT OF
LOCAL GOVERNMENTS AND INSTITUTIONAL COLLECTIVE ACTION

By

HYUNG JUN PARK

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The members of the Committee approve the Dissertation of Hyung Jun Park defended on November 2, 2005.

Richard C. Feiock
Professor Directing Dissertation

John T. Scholz
Outside Committee Member

Frances S. Berry
Committee Member

Lance deHaven-Smith
Committee Member

Approved:

Frances S. Berry, Chairperson, Department of Public Administration and Policy

The Office of Graduate Studies has verified and approved the above named committee members.

Dedicated to My Wife

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ABSTRACT

When will local governments in a fragmented metropolitan area cooperate rather than compete in their pursuit of economic development? Under what conditions and factors will cooperation evolve in a predominantly competitive environment?

Economic development is typically characterized by a competitive environment in which communities compete with each other and economic development policy area thus presents one of the toughest cases for institutional collective action. Although competition remains pervasive, there are numerous examples of collaborative approaches and cooperative actions for economic development. However the existing research rarely speaks to the question of why governments choose to collaborate rather than go it alone.

Recent work has advanced the idea that competition and cooperation are complimentary actions resulting from strategic interactions among local actors. Feiock (2004) argues that cooperation among local governments can be viewed as collective action generalized to governmental institutions. Voluntary agreements emerge as the result of a dynamic political contracting process among local government units facing a collective action problem (North 1990; Libecap 1989).

There are various types of collaborative approaches to economic development in metropolitan areas. This dissertation investigates two types of cooperative relationships in the economic development- the first are regional economic partnerships that coordinate action and promote development on a regional basis; the second are joint ventures with other local governments to pursue economic development through specific collaborative projects. Both partnership and joint venture are types of institutional collective action but the two approaches have somewhat different characteristics and we can expect ICA to occur under different conditions. This study presents and tests models of institutional collective action focusing on the formation of regional partnership and emergence of interlocal joint ventures for economic development.

Institutional collective action provides a useful framework for examining interlocal

cooperation in fragmented metropolitan areas by focusing attention not only the economic scale and costs and benefits of interlocal cooperation, but also their transaction costs. Successful collective action depends upon the benefits of cooperation outweighing the costs of monitoring individual compliance with group rules or norms (Ostrom, 1990). Overcoming commitment problems has also been linked to the ability of subjects to communicate with other participants.

The empirical results reported here suggest that cooperation can be viable when local institutions reduce the transaction costs of joint action. This provides a repudiation of the conclusion that local governments can not cooperate on economic development issues. Our results provide a strong repudiation of the recent work that concludes governmental fragmentation is destructive of regional cooperation. Cooperative action in the game theoretic model depends not only on the on mechanisms to reduce the transaction in forming partnerships. Transaction costs can be reduced by institutional level cognitive social capital that is a product of local political institutions and network relationships.

The results from the formation of regional partnership for economic development model presented here highlight the importance of the institutional level endogenous role for social capital in theories of institutional cooperation by accounting for social capital resulting from institutional interactions. The influence of cognitive forms of social capital is reinforced by the finding that interlocal agreements had a greater impact on collective action to form economic development partnerships than did individual level social capital like civic associations. At the second more micro level, the institutional collective action model focus on local governments as actors. The empirical results generally confirm that interlocal cooperation can be a viable alternative for local governments and that policy networks play an important role in the realization of cooperation. We find that both strong and weak tie resource exchange networks enhance the likelihood of economic development cooperation. Certain city attributes can be linked to interlocal cooperation for economic development. In particular, median income, development controversy and form of government affect the likelihood cooperation though joint ventures with other local governments. Both the attributes of actors and relations among them need to be accounted for in explanations of how and why they decide to cooperate with others. The empirical results demonstrate both characteristics of a city and its network influence the likelihood of joint ventures. Interlocal cooperation among local governments provides a realistic alternative mechanism to address policy externalities. These voluntary agreements emerge from

a dynamic political contracting process among local government units.

The institutional collective action framework also has potential help us to better understand the dynamics of decentralized systems of governance and to identify the various ways governments cooperate and compete. The analysis reported here suggests that a decentralized system of governance can provide these types of interactions that facilitate future cooperation. Even in the traditionally competitive economic development arena local governments engage in cooperative action and that cooperation is positively influenced by routine interactions among local leaders.

CHAPTER 1

INTRODUCTION

Ostrom (1998) poses the question: “How can contemporary social sciences explain the ubiquitous empirical evidences of effective collective actions in our history and life.” Axelrod (1984) began his well known book by asking when a person will cooperate, rather than act selfishly, in an on going interaction with another person. My dissertation will examine a similar question but at an institutional level: When will local governments in a fragmented metropolitan area cooperate rather than compete in their pursuit of economic development? Under what conditions and what factors can make a possible collective action in a predominantly competitive environment?”

Economic development is typically characterized by a competitive environment in which communities compete with each other to attract firms and high paying jobs by offering a general set of specific development programs or negotiated incentive packages (Feiock and Tao 2004; Schneider 1989; Peterson 1981; Tiebout 1956). Therefore, economic development policy area thus presents one of the toughest cases for institutional collective action. Although competition remains pervasive, there are numerous examples of collaborative approaches and cooperative actions for economic development (Ostrom, Bish and Ostrom, 1988; Post 2002; Neiman 2004). For example regional development partnerships operate in many communities. According to Olberding(2000)’s research, she identified 191 regional partnership for economic development of 244 metropolitan areas. These organizations coordinate and collectively support marketing and recruitment efforts and in some instances impose constraints on members (Olberding 2000). It is also not uncommon for local governments to enter into joint ventures with one or more neighboring communities. Neiman’s community affairs project in 2001 reported 52.3%, 138 of 264 California municipal governments adopts joint ventures with other cities to encourage economic development.

Instances of cooperation in economic development such as these can not easily be

accounted for with conventional models that focus on competition. Interlocal cooperation among local governments has attracted tremendous interest in recent years and has been linked to the “new regionalism” movement. The need to address regional problems is at the heart of the resurgence of calls for regional government (Carr and Feiock 2004). While some work in this tradition focuses on governance through inter-organizational collaboration rather than hierarchical regional government, much of the new regional research has concluded (or assumed) that cooperative solutions are difficult or impossible to achieve in jurisdictionally fragmented areas. This leads to prescriptions for consolidation of existing governments or creation of powerful regional authorities (Rusk 1995; Downs 1994; Olberding 2002).

Recent work has advanced the idea that competition and cooperation are complimentary actions resulting from strategic interactions among local actors. Feiock (2004) argues that cooperation among local governments can be viewed as collective action generalized to governmental institutions. Like individual collective actions, institutional collective actions (ICA) are motivated by a desire to achieve collective benefits that could not be realized by individuals. Voluntary agreements emerge as the result of a dynamic political contracting process among local government units facing a collective action problem (North 1990; Libecap 1989).

Because there are often strong incentives to free ride or defect from cooperative agreements, overcoming commitment problems is central to economic development. If local governments cooperate in their efforts to attract economic development-- perhaps sharing new businesses and agreeing to limit incentives-- they each receive an equal, modest payoff. On the other hand, should one of jurisdictions renege on the agreement and undercut the other(s) with inducements to prospective developers, then the cooperator gains nothing while the defector achieves a windfall payoff. If each realize what could happen if the other(s) defect, they will pursue a competitive rather than cooperative strategy and wind up with smaller payoffs than if mutual trust had induced both to cooperate. Olson (1965) asserts that fragmentation decreases the possibility for successful collective action, absent a selective incentive which could be provided only to cooperators. Thus, critics of local economic development see fragmentation of local government units in metropolitan areas as inevitably leading to non-cooperation and destructive development competition.

Ostrom et al (1992), dispute the claim that group size determines defection in a prisoners’

dilemma. Individual actors assess the probability that their contributions to a collective good will be efficacious in securing production of that good. Thus, the ability of individuals to coordinate their expectations of donations with others is critical. Successful collective action depends upon the benefits of cooperation outweighing the costs of monitoring individual compliance with group rules or norms (Ostrom, 1990). Overcoming commitment problems has also been linked to the ability of subjects to communicate with other participants. Experimental evidence reports that signaling willingness to cooperate to others by dramatically increasing donations for a period or two (Isaac, McCue and Plott, 1984).

There are various types of collaborative approaches to economic development in metropolitan areas (Cigler 1992, 1994) that differ in complexity of purpose (from information sharing to joint problem solving), intensity of linkages (from loosely coupled relationship to tightly coupled relationship), size of participants (from two to the whole metropolitan area), and the formality of agreements reached (from informal to formal). This dissertation investigates two types of cooperative relationships in the economic development arena that have not been given adequate attention and can not be satisfactorily explained with existing theories – the first are regional economic partnerships that coordinate action and promote development on a regional basis; the second are joint ventures with other local governments to pursue economic development through specific collaborative projects. Both partnership and joint venture are types of institutional collective action but the two approaches have somewhat different characteristics and we can expect ICA to occur under different conditions. What all forms of interlocal collaboration have in common is commitment problems.

Goal of Dissertation

Although the collaborative approach to economic development among local governments have increased over the past few decade, scholarly research has only recently initiated investigation of regional approaches through regional partnership (Feiock 2004; Olberding 2000, Agranoff & McGuire 2003) and interlocal cooperation by interlocal agreements (Feiock 2004 , Thurrmaier and Wood 2002, Kruger & McGuire 2005). However the existing research rarely speaks to the question of why governments choose to collaborate rather than go it alone. The goal of this study is to present and test models of institutional collective action focusing on the formation of regional partnership and emergence of interlocal joint ventures for economic

development.

I investigate when and how local governments enter into these relationships by examining patterns of development cooperation across cities and metropolitan areas. By applying a combination of comparative statistical analyses, game theoretical models and social network analysis, this study will identify how social capital linked to the characteristics of cities and the structure of network relations among local government reduce the commitment problems in cooperative development approaches. This dissertation is designed to answer two set of research questions:

1. Why do regional partnerships for economic development emerge in some metropolitan areas but others? What factors influence the emergence of regional partnership for economic development in fragmented metropolitan areas?

2. Why do some municipal governments engage in interlocal joint venture for economic development with other local governments? What factors affect participation in joint ventures with other local governments for economic development?

Overview of the dissertation

Following this introductory chapter, Chapter 2 reviews literature which is relevant to collaborative approach to economic development strategy for a fragmented metropolitan area. This review looks at two different model of a collaborative approach for economic development among local governments: joint venture for economic development as interlocal cooperation and regional partnership as regional cooperation. Both models focus on how to overcome collective action problem among local governments in a fragmented metropolitan area based on game theory and transaction cost theory. It then examines the regional cooperation model more closely by reviewing four dimensions of social capital and institutional factors around metropolitan region. Second inter-local cooperation model is explored more closely by reviewing characteristics of network structures, political institution, and community those affect transaction cost on institutional collective action.

Since the research presented in this dissertation focuses on regional partnerships and joint ventures that voluntarily emerge as collective action to enhance economic development in competitive fragmented metropolitan area, Chapter 2 concludes with a review of concepts and studies from the institutional collective action literature.

Chapter 3 develops the theoretical framework which is used to study the formation of economic development regional partnerships and joint ventures. This framework is based on the theory that in situations with institutional collective action and no central authority, transaction cost is the key factor in the development mechanisms which support cooperative behavior (Feiock 2004; 2005). This institutional framework builds upon theories and studies from collective action, institutionalism, common pool resource theory, transaction cost theory, game theory and bargaining theory. Using social capital and network theory enriches the institutional collective action framework from Ostrom(1990)'s *institutional analysis and development framework* (IADF).

This chapter develops more fully two models of institutional collective action for economic development among local governments in metropolitan areas specifically- regional partnership for economic development as a regional collaborative approach and joint venture with other local governments for economic development as an interlocal collaborative approach. A Regional approach is that situation with a large number of parties and no central authorities. Joint venture as interlocal collaborative approach means that small number local governments made a common third party institution for economic development, it basically came from dyadic relationship (Feiock et al. 2005).

Chapter 4 describes the methodology which used to test the four dimensions social capital theory on regional partnerships for economic development as regional cooperation approach in fragmented polycentric U.S. metropolitan areas. The second set of analysis examines the institutional collective action framework based on transaction cost theory and network characteristics on interlocal joint venture for economic development as interlocal collaborative approach to economic developments.

Chapters 5 and 6 presents the results of the two analyses described above. Finally, Chapter 7 discusses the implications of the research for both scholars and practitioners. It highlights some contributions of this study to local and urban governance area and some limitations of the research and makes recommendations to address these limitations as well as recommendations for additional study of interlocal cooperation and regional governance.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews literature relevant to the study of collaborative approaches to economic development in metropolitan areas. U.S. Metropolitan is kept alive by collaborative approach, on a spectrum from intergovernmental cooperation to regional governance(Walker 1987). The first section studies of the interlocal cooperation and local governance and problem of regional economic development. It reviews literature on characteristics of economic development of local governments and problems related with transaction cost and collective action problem. It examines more specifically players' gain and cost of cooperation for economic development of local governments. For that, this section also outlines two types of collaborative approach to economic development: 1) regional partnership for economic development as regional approach with large numbers entries of local governments in decentralized polycentric (Ostrom, Tibout and Warren 1969) metropolitan area, and 2) joint venture with other local governments to encourage economic development as interlocal cooperation approach that means two or small number of local governments make an joint agreement.

The second section reviews transaction cost theory and literatures related to the problems of collective action among individuals and collective action among institutions or organizations. This section also reviews why transaction cost is important in institutional collective action and interlocal cooperation.

Contract theory and Common resource theory literature explain why transaction cost is important to overcome collective action problem.

The next sections reviews what factors make it possible to overcome collective action problems and sustain regional and interlocal cooperation in fragmented polycentric metropolitan area from various literatures. Third section reviews the game theory literatures and find what factors are critical role in interlocal cooperation. Game theory literatures suggest how to shape

interlocal / regional cooperation game and why local governments cooperate each other and why not. Game theory literatures insight what might reduce transaction cost in bargaining/ cooperation among local governments.

The fourth section reviews in more detail social capital theory which can reduce transaction cost and make it possible to overcome collective action problems. Researchers suggest that social capital is valuable for helping solve problems of coordination and cooperation because it reduces transaction costs, and facilitates the flow of information between and among individuals in community or organization (Lazega & Pattison, 2001; Lin, 2001; Bolino et al. 2002). Similarly, Putnam (1993) argues that social capital makes collective works easier and, ultimately, facilitates economic and community development. The difficulty in identifying the influence of social capital is compounded by a current lack of consensus on the meaning of the term. The term “social capital” is used in many recent books and articles but in vastly different ways (e.g., Sandders and Nee 1996; Hagan, Millan, and Wheaton 1996; Schiff 1992). The lack of an obvious link between theory and measurement has, in some cases, lead to the use of questionable indicators of social capital. Therefore this section also classifies the different dimension of social capital based on the literature reviewed.

The last section reviews network literatures related with network characteristics, one social capital concept, and its influence on institutional collective action. Especially this section developed new concepts of network classification; resource network and contract network based on the social network literatures

Collaborative Approach to Economic Development and Problems of Regional Economic Development

“Someone who live in one local jurisdiction, work in another, and shops and seek recreation in others, may be affected by several many local governments”(Nice and Fredericksen 1995; 49p). Many local governments within metropolitan area are not to enough large achieve economic of scale through such techniques as hiring highly trained personnel and using specialized equipment (Stephens and Wikstrom 2000). A multiplicity of small municipal governments produces unequal needs and resources. Some jurisdiction encounters many problems with limited tax base and other jurisdictions are blessed with riches and few

considerable problems. Increasing a coordinated attack on area wide problems is too difficult with a lot of independent local governments, because the task of getting them to agree on a plan of action is formidable and, at times, impossible (Walker 1995; O'Toole 2000). Further problems come up because the existence of many small size municipal governments produces a neglect of spillover effects. Public choice perspective holds that having many, small local governments are beneficial (Tibout 1956; Ostrom et al 1988). Diverse local governments offer various packages of services, and citizens shop around for the arrangement of services they desire like market.

Larger jurisdictions are not necessarily more efficient. If city government over 250,000 in population may experience diseconomies of scale because of the greater problems of controlling larger organization (Bish and Ostrom 1973).

Economic spillovers and dependencies exist between central cities and their suburbs. Empirical work reports correlations between central-city income and suburban income in U.S. metropolitan areas increased significantly over the last two decades (Savitch, Collins, Sanders, and John 1992; Ledebur and Barnes 1992; Voith 1998). Nevertheless, the political fragmentation of metropolitan areas can make it difficult to address economic development even when interests are similar. Even though top down solutions have increasingly been replaced by voluntary cooperation among governments and sectors, decentralized units of government are typically assumed to be unable to deal with regional issues and concerns (Rusk 1995; Downs 1994).

The need for regional solutions to economic development policy as well as whole public policy problems of local government has been a major challenge for policy makers over the past decade at the local level. Locality boundary-based and jurisdictional interests have demanded a new set of intergovernmental strategy in interlocal relations (Andranovich 1995).

Can institutional collective action among local governments effectively integrate a region through voluntary alliances, institutions and agreements as alternative to consolidation or regional government? Much of the literature suggests the answer is no.

Joint gains are not sufficient, for establishing cooperative relationships (Libecap 1989; Riker and Sened 1991). Transaction costs have been viewed as a barrier to voluntary agreements among local governments that would address spillovers and common economic concerns. Inman and Rubenfield (1997; 2000) note that bargaining, information, agency, division and enforcement problems prevent Coasian bargains among local governments. Studies of economic development policymaking suggest argue that strong incentives to free ride or defect from cooperative

agreements lead to irresolvable commitment problems (McGuire 1991; Olberding 2002). Nevertheless, local governments are sometimes able to overcome the barriers to cooperation. In practice, it is not at all uncommon for local governments create intergovernmental policy agreements (Gainesborough 2001; and Orfield 2002). Gillette (2002:234) documents a number of instances where interlocal agreements evoke claims that suburbs must subsidize central cities or even commitments to protect the central city's earnings tax base. With the exception of Houston, Summers (2000) found some form of regional tax sharing between the central city and its suburbs in each of the 27 metropolitan areas she examined.

Regional Economic Development Partnership as Regional Collaborative Approach

Gainesborough (2001) and Orfield (2002) report that as suburbs age, their political affiliations begin to align more closely with those of the central cities they surround, challenging the conventional assumption that suburban cities can be counted on as enclaves for those escaping big city problems. These findings would also seem to suggest that shifts in political alliances may make regional coordination more palatable than once thought.

The nature of regional cooperation has shifted over the past three decades. Creation of multipurpose governments through consolidation of existing units has declined, but there have been tremendous increases in targeted regional action through inter-local agreements (Post 2002b), creation of special districts (McCabe 2000; 2003) and regional compacts or partnerships among local governments in a metropolitan area (Olberding 2002b). Top down solutions have increasingly been replaced by voluntary cooperation among governments and sectors through public-private, intercommunity partnerships (Feiock 2004).

Regional economic development partnerships have become an increasingly popular regional governance strategy. Development partnerships are an "alliance formed by local governments, often with the help of private sector firms and nonprofit organizations, which has a mission of enhancing the economy of a multijurisdictional area" (Olberding 2002b, 253).

Partnerships are multilateral contractual arrangements for which non-participation is considered lack of cooperation. The scope of actions these partnerships take on varies tremendously. In a loosely coupled relationship, the actors agree to pool resources and to pursue opportunities. Almost all engage in regional promotion and information provision to prospective business. Some coordinate other local development activities and a few restrict incentives or

include non-competition provisions. For example interviews with local officials in the Milwaukee area reveal that most local governments participate in and contribute to development efforts of the Milwaukee Regional Economic Partnership (Steinacker and Feiock 2005). Local governments' financial contributions to the organization are rather modest and primarily support marketing efforts. Nevertheless, the organization has adopted a "fair competition" policy in which they agree to inform the development office in a neighboring jurisdiction is a firm presently located in that jurisdiction inquires about location incentives. A recent study of regional partnerships for economic development reports that partnership agreements to share the costs and benefits of growth promotion among governments in a metropolitan area are not uncommon (Park and Feiock 2002).

Joint Venture or Alliance with other local governments for Economic Development as Interlocal Collaborative Approach

Alliances or joint ventures with another local government(s) provides a novel measure of voluntary interlocal cooperation that involves critical exchange, sharing, or co-development and can result in enduring commitment between partners (Feiock 2004).

Local governments enter into joint development ventures with a neighboring jurisdiction for many purposes. A joint venture is a more tightly coupled relationship than a regional partnership. Common purposes include provision of public facilities, industrial parks and urban revitalization efforts carried out by neighboring jurisdictions. Joint venture with other local governments to encourage economic development is distinguished from service contract in that responsibility for outcome of specific function or the construction and operation of a facility or financial investment would be shared through the creation of a committee board or administrative agency to handle service responsibilities. One example is a board consisting of representatives of each participated local governments. For example, the cities of Lewiston and Auburn Maine which face each other across the Androscoggin River have coordinated efforts to coordinate and share the costs of restoring old downtown mill buildings (Pierce 2005). Feiock and Park (2004) reported that almost 30 percent of communities in a national survey engaged in one or more joint ventures with other cities to encourage development. Johnson and Neiman (2004) found that economic development "joint ventures with other cities" were not uncommon in California and report almost a third of the cities in their study had participated in joint

development ventures.

Institutional Collective Action Transaction Cost Theory

Recent work on common pool resource issues extends the collective action model by identifying internal influences on collective action. The work of Ostrom (1998) demonstrates that internal relational mechanisms are sometime adequate to overcome barriers to collective action. For example, face to face communication can induce cooperation through exchange of commitments among actors. Trust among neighbors reinforces cooperative norms, and produces a collective identity that reduces transaction costs of collective action. Accounting for both the contextual elements of collective action and internal resources for overcoming social dilemmas is necessary to understand cooperation among local governments that involves commitment problems.

Previous work on regional governance has not combined these elements but they are both necessary to understand cooperation among local governments because both contextual factors and internal relational factors determine the benefits and costs of institutional change.

Institutional collective action is similar to individual collective action in many ways, but requires different ways of defining the actors and context. The term institutional collective action (ICA) is used to describe the formal and informal institutions by which cooperation is achieved among local governments, between levels of government, and between local government units and other actors in the community (Feiock 2004). ICA can be viewed as a form of collective action generalized to government units and other organizational actors. Like individual collective action, ICA is motivated by a desire to achieve a collective benefit not possible for a single jurisdiction (Feiock 2001).

Context has generally been measured at the level of the community as if citizens were the participants in collective action. Because we are concerned with cooperation among governments and organizations, we should focus on common institutional incentives and administrative values. For example, homogeneity or heterogeneity among political institutions is relevant to leaders expectations about the actions of other participants. In addition to community characteristics, we need to take into account the role of social capital in promoting ICA.

Five literatures are particularly useful in trying to understand why transaction cost is

important for institutional collective action and how cities form alliances, partnerships, contracts and informal agreements with each other to provide programs and services to their citizens. The first applies a constitutional contracting approach to investigate negotiation of agreements among local governments (Heckathorn and Maser 1987).

The second investigates successful cooperation among decentralized actors faced with common pool resource problems. The third, game theory explains what factors affect reducing transaction cost and why cooperation emerge in fragmented metropolitan areas based on iterated game theory, In addition, last section reviews literatures social capital and network structure theory, one of important factors which influence to reduce the transaction cost and enhance information flow by trust, reciprocity and reputation.

Contract Theory

A contractual framework provides useful tools for investigating institutional collective action because cooperative arrangements stipulate future actions of parties and the benefits and cost of compliance or noncompliance. Cooperation is secured by defining the obligations, rewards, and penalties imposed on contracting parties (Milgrom and Roberts 1992). Cooperative action (contracting) requires joint, concession, and individual rationality be satisfied. The expected outcome of cooperation must satisfy “joint rationality” in that no participant would engage in cooperative effort absent expectations of an opportunity for all parties to gain. Concession rationality means participants expect others to make reasonable concessions in dividing up net gains. Individual rationality means that no participant will commit to an agreement without expectation that other parties will comply (Maser 1998).

Incomplete information about one or more of these conditions introduces risk and thus transaction costs for potential arrangements. Satisfying the rationality conditions requires information. Although information mitigates the costs of uncertainty, obtaining it can be costly. Stability, decisiveness, responsiveness, and efficiency are enhanced by procedural safeguards and interlocal relationships that reduce uncertainty (Heckathorn and Maser 1987). As discussed below, one reason why the structure of networks among local government units can facilitate the emergence and success of interlocal agreements is the supply of information among the parties reduces risks of incoordination, inequitable divisions or defection (Maser 1998, 541).

Coordination problems result if local government leaders misconstrue the feasibility of

cooperating and risk missing out on efficiency gains from cooperative action. The more serious the underlying problem, the larger the aggregate gains from resolving it, and the greater the likelihood of a cooperative arrangement to do so (Lipecap 1989; Lubell, et. al. 2002; Ostrom 1990; Ostrom, Gardner, and Walker 1994). Joint gains don't guarantee cooperative relationships will be established (Riker and Sened 1991). Information on other local actors is critical to coordinating action for joint benefit.

Division problems occurs when parties have conflicting preferences and require concession rationality through negotiation that provides fairness and equity in allocating benefits and cost (Heckathorn and Maser 1987). Allocation of joint gains will be affected asymmetries in preferences and political strengths between actors. The greater the heterogeneity of the participants and the more clear-cut which actor gains most, the higher the political opposition to a cooperative solution may be.

The bargaining positions of cities differ not only because of different service needs and production capacities, but also because local government leaders differ in their political institutions. Local officials perceptions on the need for a collective service, the importance of its timing, and their discount rates shape their bargaining positions. Each wants joint gains from collective provision but also a large share of the benefits. Social and cultural norms regarding the fairness of divisions may preclude some feasible outcomes from being reached. Participants respond to the perceived fairness of the deal and may reject offers where the stronger partner seems to benefit disproportionately (Roth 1995).

Differences in bargaining power are also linked to the type of good provided. For capital intensive, physical infrastructure goods, the city with the largest population may command greater power given the declining average costs of such projects (Steinacker 2004). Given their size, these cities capture most economies of scale in construction and operation even if they pursue the project on their own. If they cooperate with other communities in providing an expanded service, they may be able to force the smaller cities to bear a disproportionate share of the cost because that is still cheaper for them than constructing the project on their own. For labor intensive services where economies of scale are less of an issue, the relative power across cities may be more equal. Interlocal agreements for fire and police protection compacts are more likely to reflect costs proportionate to services provided because any city can do nearly as well if they pull out of the compact and provide the service on their own. Defection occurs if one or

more of the parties do not comply with the agreement, thus, the outcome must have an individual rationality to assure an efficient agreement. Where third party enforcement is not feasible, the success of cooperative arrangements is dependent on the commitment of the participants to each other and the collective goals. The literature on common pool resource dilemmas specifically addresses how decentralized actors might solve commitment problems.

Common Pool Resource Problems

Differences between individual and institutional actors and the unique problems this presents for understanding collective choice have been largely ignored in studies that apply individual level theories of social capital and collective action to corporate actors. For example, if we are interested in how the homogeneity or heterogeneity of actors influences inter-local cooperation we would be less interested in the demographic profile of citizens in the region as a whole than the composition of individual government units and heterogeneity across those units. From the perspective of institutional collective action, we would also be interested in the heterogeneity of positions and preferences of the public officials in those government with authority to make interlocal agreements (Feiock 2004).

Local cooperative institutions have emerged in some settings to resolve collective action problems involved in the management of natural resources when potential benefits of cooperation outweighed the transaction costs of forming new institutions (Weber 1998; Lubell, Schneider, Scholz and Mete 2002). Feiock and Carr (2001) framed the creation of special districts by local governments in a similar manner by focusing on how contextual factors, such as economic conditions, local political culture, and state level rules shape institutional supply. Voluntary cooperation among local governments is problematic because there is uncertainty other actors will abide by agreements through continued cooperation and individual government units can realize political or economic gains from being free riders.

Voluntary collective action occurs in small groups because transaction costs of coordinating actions among participants, monitoring their subsequent behavior, and identifying non compliance with agreements is less than it would be for a larger set of actors. Collective action among larger groups of actors typically requires a third-party to absorb organization costs, apply coercion, or provide selective incentives to reduce the transaction costs of reaching agreements and enforcing them (Olson 1965).

Collaborative agreements can involve all or a subset of local governments in a metropolitan areas and take the form of interlocal agreements between a city and one or more neighboring local governments or partnerships arrangement. Government officials who participate in cooperative agreements are agents, thus, principal agent problems complicate the calculus of cooperation. The characteristics of constituencies and diversity of preferences within government shape the preferences and bargaining positions of cities. The structure and powers and political security of public offices is particularly salient.

The gains from an interlocal agreement can be decomposed into utility gains from the provision of the service (to service recipients), efficiency gains from coordination or capturing spillovers (to taxpayers and affected citizens), political advantage or disadvantage (to local officials), and cost of controlling risks and transaction problems that could reduce the benefits available to service recipients, taxpayers, and government officials. These benefits and costs will be shaped by the characteristics of the governmental actors involved in a potential agreement and the structures of the informal information/contacts network and formal contractual networks in which they are imbedded. The characteristics of the communities, political institutions and network relationships among the actors are central to cooperation because they determine the ability of decentralized systems of government to overcome risks of incoordination, inequitable division, and defection.

Game Theory and Institutional Collective Action

Institutional collective action in metropolitan areas is difficult to understand and achieve because it confronts strategic interactions among numerous organizations and jurisdictions, multiple potential solutions, and a high degree of uncertainty. Each jurisdiction chooses their own policies, but their outcomes are directly affected by the decisions of other local actors (Brueckner 2001). This type of strategic behavior can be modeled as a game.

New economic institutionalism assumes actors motivated by rational cost/benefit calculations and sensitive to the transaction costs of making deals. This approach seeks to solve the collective action problems through the use of diverse bargaining games or strategies (Hall and Taylor 1996, 943p). It is thus a micro level approach, working from individual level actors upward (Reich 2000, 505p). Competition may fail to achieve economic development as a “public good”, but institutionalized cooperation among local governments like a regional

partnership may address these institutional defects. Olson (1965) concludes that rational self-interested individuals will not act to achieve their common or group interests. “*While collective action may make a group better off, each individual possesses a strong economic incentive not to contribute his share of the costs and instead to take a free ride on the efforts of others*” (Olson 1965: pp133-134). To the extent that business attraction (or retention) to a metro area is a public good, inter local development policies are susceptible to the collective action problems described by Olson.

The standard theory for this analysis has been a static (one time) two person prisoner’s dilemma (PD) model. This game theoretic model illustrates how “cooperation would lead to better outcomes for all (the Pareto-optimal solution) but the dominant strategies of every player results in defection. The prisoner’s dilemma framework has been applied in some economic development studies (Steinacker, 2003), applying the usual models of collective action to policy problems is problematic because they assume constraints (rules and decision-making) are exogenous and fixed unless external authorities changes them (Ostrom 1997). Fragmented metropolitan areas are polycentric systems with no central governing authority.

As described earlier many examples of cooperation for economic development exist in real world. Simple PD models can not adequately account for these outcomes because in many real cases of collective action the actors have the ability to change the constraints that they face through endogenous factors like reputation and trust which we call social capital. Ostrom (1996) argues that repeated relationships among local actors build reputations for trustworthiness, decreases uncertainty, and reduces transaction costs like information requirements under uncertainty. Real world situations lack perfect information, therefore transaction costs are important in collective action. The static model of the prisoners' dilemma game is unrealistic in that most social interactions reoccur. Axelrod advances a more realistic model of an iterated prisoners' dilemma, where cooperation (under certain circumstances) is in fact the optimal strategy (following Taylor 1987, and Axelrod 1981).

Iterated Prisoners Dilemma Game

Axelrod (1984) and Taylor (1987) argue that through the repetition of games, actors are made aware that they will meet their adversaries again in the future. This provides a rationale for players to choose cooperative strategies. Although assumptions concerning actors’ individual

rationalities are maintained, cooperation can be accounted for. The question is whether the assumption of individual rationality as the basic principle for action needs of adjustment. The prisoner's dilemma game is criticized for the assumed absence of communication between actors. This is frequently not the case in policy practice. Nevertheless, "cheap talk" alone doesn't change the PD equilibrium (Ostrom 1998). If reputations are built through long relationships within networks (sub-system or issue network), and this game is a repeated, rather than a single-shot game, cooperative strategies by the players are possible. At first glance city government efforts to attract a business firms appear to be a one-shot game because they involve a specific issues or firms. But even on single issues, cities engage in repeated plays, or opportunities to change their behavior.

As discussed above, fixed geographic borders mean that neighboring jurisdictions must be repeat players. In repeated plays of prisoner's dilemma games, a player can achieve the benefits of the Pareto-optimal outcome with a strategy of "tit-for-tat." A tit-for-tat multi-period strategy is defined as playing the cooperative (dominated) alternative in the first play of the game (*the nice strategy*) and thereafter mimicking the other player's previous choice (*reciprocity*) (Lubell and Scholz 2000, 2001). Axelrod's (1988) model of the evolution of cooperation was based on the iterated Prisoner's Dilemma. Empirical work following this approach has established the prevalence of cooperation based on reciprocity. As long as future payoffs continue to be valuable, short-term gains from defection will outweighed by the long-term gains from continued cooperation. Evolutionary theories seem to do better job of explaining collective action that does occur and why groups sustain and build cooperation over time (Ostrom 2000). More recently several scholars have expanded this argument to n-person repeated PD game (Davis and Holt 1992; Miller 1992, Bianco and Bate, 1990; Andreoni and Miller, 1994; Lubell and Scholz 2000, 2001). Interaction with other governments (reciprocity), and past cooperation (nice strategies) between/ among city governments affect present and future cooperation because actors consider their reputation (Andreoni and Miller, 1994) with other governments in the metropolitan area and value their networks. We consider these network investments a kind of cooperative norm or institutional level social capital that reduces transaction costs (Park and Feiock 2003). Bicchieri(1990) suggests an evolutionary approach to norms provides better answers to these questions. Social norms are "the outcome of learning in a strategic interaction context; hence, they are a function of individual choices and, ultimately, of individual

preferences and beliefs" (p. 839). Norms are clusters of expectations, or conditional preferences which thus depend on the preferences of others. Cooperative norms are a sanction that enhances commitment and facilitates cooperation of local governments (Axelrod, 1995). Commitment and coordination are also affected by the structure of networks among local government actors. Local government actors get the information from contacts and interactions with other actors in their network. Akimov, Vladimir and Mikhail Soutchanski (1994) argue that information availability to rational actors is very important to cooperation among actors in their "*Automata Simulation of N-Person Social Dilemma Games*".¹

Cooperation among local governments is more likely the longer the horizon of their relationship. In a repeated relationship, such as with geographically fixed government units, each actor stands to benefit by acquiring and preserving a positive reputation. In uncertain real world situations, the signal of reputation does more than compensate for incomplete information, reputation is a valuable social capital asset: building it up and maintaining it entail a short-run cost, and running it down or failing to maintain it gets some short-run benefit. If future is long enough or important enough, short-run temptation can be resisted (Dixit 1996). If the forces of repetition and reputation are strong enough, no explicit commitment mechanism is needed to secure commitment: local governments' own incentives ensure that they will not be tempted to defect from commitment.

As a cooperative norm in metropolitan areas, reputation and commitment produced by network interactions provide considerable power to explanations of cooperation among governments in polycentric systems. Repeated relations are performed by informal and formal networks among local governments that reduce the transaction cost of investments in reputation making interlocal cooperation easier. Network structures are thus critical to cooperative strategies by local governments.

¹ The authors investigated relationships between information received by the automata and the emergence of cooperation in a simulated evolution process. In some ways, this approach is similar to that of Axelrod. However, instead of determining the most successful strategy, the authors seek surviving strategies in a social dilemma environment. Previous results showed that cooperation could be established asymptotically under partially centralized control. In this model there is no such control. The main result is that more sophisticated behavior of self-seeking automata compensates for the absence of such control. Moreover, cooperation is established more rapidly when more information is available to the automata.

Social Capital and Institutional Collective Action

Social capital can be a critical resource to resolve commitment problems, reduce transaction costs, and smooth the flow of information between and among individuals in community or organization (Ostrom, 1998; Ostrom and Ahn, 2002; Park and Feiock, 2003). Putnam (1993) argues that social capital makes collective work easier and, ultimately, facilitates economic and community development. In order to better understand how social capital can influence the formation of regional development partnerships and joint venture, we build on recent efforts to identify underlying dimensions of social capital relevant to collective action (Park and Feiock 2003). Social capital in general, and cooperative norms in particular, are a product of interaction, not just static characteristic of communities. Thus, rather than assume a lack of cooperation in fragmented areas, we investigate the extent to which conditions that promote these norms exist and their relationship to actual cooperative economic development efforts. Patterns of cooperative service delivery interactions among cities within metro areas are defined by fiscal transfers through service agreements. In the next section I define and classify social capital based on its scope and form. Identifying the various types of social capital allows us to integrate contextual elements of transaction costs theories with the internal behavioral explanations for overcoming social dilemmas (Ostrom and Ahn, 2002). While several studies have laid claim to testing social capital explanations for local governance, social capital has generally been measured contextually by indicators of civic culture not by measures of interaction among institutional actors. The following section elaborates how social capital reduces barriers to institutional collective action.

This allows me to identify different “types” of social capital that can reduce the costs of development cooperation for local actors.

Dimensions of Social Capital

The scope of social capital: The conceptualization and measurement of social capital differs depending on who is the actor and what is the unit of analysis (Borgatti and Jones 1998). Putnam (1995) regards social capital as a quality of groups while Burt (1992) conceives of social capital as the value of individual’s social relationships. Analysis of individual-level social capital

is usually related with face-to face interaction between and among individuals (Turner, 1999), and those features of horizontal relationships, such as networks of individuals, and the related norms and trust, that generate externalities for the group, organization, or community as a whole (Putnam, 1993). James Coleman (1990) includes vertical as well as horizontal associations and behavior within and among organizations by expanding the unit of observation and introducing a vertical component to social capital.

Other scholars focus on social capital at an institutional level as the embedded relational and institutional capacity of institutions. This view includes the most formalized institutional relationships and structures, such as the rule of law and draw on the work of Olson (1982) and North (1990). The phenomena related with the micro and macro level conceptualizations are complementary and their coexistence maximizes the waves of social capital on economic and social outcomes. For example, macro institutions can provide an enabling environment in which local associations can develop and flourish; local associations can sustain regional and national institutions and add a measure of stability to them (Grootaert and van Bastelaer, 2001).

Forms of social capital: Uphoff (2000) and Landry, Amara, and Lamari(2001) suggested two forms of social capital—structural and cognitive (or relational). Relational social capital is generated from cognitive processes and reinforced by trust, reciprocity, collective-identity (e.g., sense of community) and shared norms, beliefs and recognitions that contribute mutually beneficial collective action (Lin 2001; Uphoff 2000; Putnam 2000). It is therefore more subjective and difficult to measure (Grootaert and van Bastelaer, 2001).

Structural forms of social capital concern the roles, rules, procedures, and networks that facilitate information sharing, collective action, and decision-making through established roles and embedded networks and other social structures. As such, it is an externally observable construct (Grootaert and van Bastelaer, 2001). The structural dimension of social capital includes rule of law, formal institutions and organization structures, but it also encompasses the overall pattern of relationships in an organization and its included network. This conceptualization is similar to Granovetter's (1973) notion of weak ties. The relational dimension of social capital concerns the nature of connections between individuals. It is characterized by levels of trust, shared norms and perceived obligation, and sense of mutual identification. This conceptualization of relational social capital is similar to Granovetter's

(1973) notion of strong ties.

Whether at the individual or institutional level, social capital exerts its influence on development in both structural and relational forms (Grootaert and van Bastelaer, 2001). By classifying types of social capital based on form and scope, I treat social capital as a genuine asset that requires investment to accumulate and generates a stream of benefits. Differentiating the types of social capital may help us understand how local governments are able to overcome barriers to cooperation and form regional partnerships.

Institutional (Macro) Level	Institutional Framework Institutions of the state, Court System, Federalism Social Equality & Diversity	Relational Governance Cooperative Norms Trustworthiness, Shared Beliefs & Reputation
Individual (Micro) Level	Associational Networks Organization affiliations, Civic Engagement and Participation, Volunteer Organizations	Social Trust & Trustworthiness Local Norms and Values Informal sanctions, Shared Belief, Local Conventions
Structural (Exogenous)		Cognitive/Relational (Endogenous)

Source: Park and Feiock 2004, modified from Grootaert and van Bastelaer(2001)

Figure 1 : Dimensions of Social Capital

Lubell and Scholz (2001) suggest that reciprocity in relationships among governmental and non-governmental actors and lengthy time horizons are necessary to achieve sustainable development and to overcome collective action problems in environmental management. Extending these arguments, I contend that cooperative development actions require social mechanisms to establish reputations, resolve conflicts and share information and intentions.

Social Capital and Institutional Collective Action

Specific types of social capital influence collective action different ways. *Institutional level /Structural (i.e. institutional) social capital* is defined by the upper left quadrant of Figure 1. This encompasses institutions and rules of higher-level government that reduce the transaction

costs of creating and maintaining inter-local cooperative activities. Since property rights are often imperfectly developed and applied, collective decisions on how to manage common resources are critical to their use.

Individual level /cognitive social capital (i.e., endogenous social capital) is defined by the lower right quadrant of Figure 1. This category social capital such as social trust, shared norms, and informal sanctions that reduce transaction costs. Social interactions among individuals in communities produce social norms that influence information, monitoring, and enforcement costs and thus facilitate or impede cooperation and collective action.

Individual level /Structural (i.e. associational) social capital is defined by the lower left quadrant to include organizational affiliations and participation, networks, and associations that provide informal and formal frameworks to organize information sharing, coordination of activities, and collective decision-making. Participation by individuals in associational networks increases the availability of information and lowers its cost. This information, especially if it relates to the benefits of regional approaches, can play a critical role in increasing promoting cooperation. Participation in associational networks can foster attitudes of mutual trust that make it easier for a group to reach collective decisions and implement collective action.

Institutional level /Cognitive social capital is defined by the upper right quadrant and encompasses cooperative norms and trustworthiness among local governments resulting from collective experience and interactions that build and reinforce collective norms reduce opportunistic behavior. In settings where a certain behavior is expected from organizations for the collective benefit of the larger region, reputation pressures and fear of exclusion can induce actors to provide the expected behavior. This critical dimension of social capital has been neglected in work that casts social capital as a feature of political culture. In doing so, this work treats social capital as an exclusively contextual variable (see also Jackman and Miller 1998).

Institutional trust can be seen as a product or by-product of local government units facing a collective action problem. Individual cities routinely engage in cooperative agreements with neighboring local governments in a region with the expectation of securing services or other benefits to their residents (Post 2002b). As cooperation continues to provide those benefits, the parties to these exchanges build reputations for being trustworthy, providing in the process a feedback mechanism that enhances future cooperation and collective action. Thus interlocal agreements provide mechanisms for exchange of resources, commitments and trust that can

reinforce cooperative norms. Interlocal agreements also build norms of reciprocity by overcoming small second-order dilemmas regarding service delivery. If local governments enter into cooperative agreements that produce social capital as a by-product, it makes formation of metro-wide cooperative organizations easier. The next section examines formations of regional economic development partnerships with models that include both contextual and cognitive forms of social capital.

Network Structure and ICA

The ICA framework argues that networks of relationships among local government units provide a critical mechanism for overcoming transaction costs barriers to collective action that can facilitate joint ventures with neighboring jurisdictions and participation in regional organizations to promote growth. While recent work has examined the implications of network structures for service performance (Agranoff and McGuire, Provan and Milward Meier and O'Toole), the influence of relationships among local government units on the emergence of cooperation has not been systematically addressed.

Scholz, Feiock and Ahn (2005) identify two layers of networked relationships. The first is the network by which individual local government officials engage in communication with each other and share information. The structure of these contacts among officials constitutes a *Resource Network*. The structure of these social relationships can be linked to individual/structural social capital as defined earlier. I will investigate how the structure of resource networks influences the likelihood of interlocal development cooperation. Local government with a central position in a network of bridging or “loose-ties” (Granovetter 1973) with other governments and actors in the community have sources of information on actors political and economic situations and potential for mutually beneficial projects and alliances. Alternatively, dense overlapping clustered or “strong tie” relationships in which local governments interact frequently with the same actors address commitment problems by reduce division and enforcement costs though the development of commitment and trust.

The second layer of networks encompasses more formal and links that result from the patterns of legal or contractual ties among local government units. The existing structure of interlocal among local government units constitutes a *Contract Network* (Scholz, Feiock and Ahn 2005). These ties are also a social network and can be linked to the relational governance form

of social capital. The position of a government in both the resource and contract networks is expected to influence the transaction costs and benefits of cooperative economic development activities. The structure that will best secure institutional cooperation will depend on the nature of the contracting problem. Previous alliances shape new alliances through information about current or potential partners capabilities and trustworthiness, timing and referrals (Burt 2005: 192). Cowell (2004) argues that formal contractual relationships are the organization level equivalent of social capital because these organizational relationships foster trust and obligations.

Because the nature of regional partnerships and joint ventures are very different, we expect different combinations of community characteristics, political institutions, and network structures will minimize transaction costs for institutional collective action. Before describing the empirical tests, specific expectations based on the ICA framework are presented for each. In the case of joint development ventures a game-theoretic model of the choice of collaboration partners is outlined.

CHAPTER 3

THEORETICAL FRAMEWORK

These collaborative approaches to economic development notwithstanding, formal cooperative agreements may be underutilized. If so, it does not necessarily mean that decentralized governments do not have an interest in cooperation, instead, it may reflect contracting costs that make otherwise efficient agreements costly to negotiate and implement. Moreover, where contracting costs are high, local governments may rely on relational contracts and informal agreements that do not entail the bargaining and monitoring costs inherent in explicit contracts.

The next section attempts to identify conditions under which autonomous local governments will have incentives enter into policy alliances with their neighbors and to be attentive to the interests of neighbors, including intraregional inequities. To the extent that conditions for cooperation exist, is it sustainable? Can multi- jurisdictional and regional problems be effectively addressed through cooperation and institutional collective action rather than centralization? We investigate these questions by identifying factors that affect the transaction costs of contracting and the ability of decentralized actors to overcome commitment problems.

Transaction Costs and Cooperation in Economic Development

A contractual arrangement between two local government units constitutes a dyadic relationship. If each unit also participates in other agreements with other local governments, they are also involved in dyadic relationships with those other governments. Together, the dyadic 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). Cities change strategy as a result of learning from prior experiences and encounters and their expectations of future dealings with each other. The presence of a contractual link is voluntary in that non participation, even if costly, is always an option. Local governments maintain their relationships when their benefits exceed the expected value of one-time interactions.

Local governments bargain the terms of interlocal contracts in light of the information they have available (Maser 1985). The resulting governance structure is the product of a series of negotiated agreements over governance arrangements and substantive benefits. Rather than relying on centralized authority, local governments themselves negotiate the technologies and strategies to produce desired outcomes, the obligations of the parties, and the timing and duration of the agreements. Information impactedness because of uncertainty and opportunistic behavior can be minimized in this process by repeated interactions among multiple neighboring governments.

Voluntary agreements or governance emerge from a dynamic political contracting process among local government units facing a collective action problem (Feiock 2004). North(1990) defined “*transacting as defining , protecting and enforcing the property rights to goods*” and he also said “*transaction cost is the cost of making exchange or indirect production expenses*”. According to the Coase Theorem (1960), if transaction costs are zero, rational parties will achieve a Pareto-efficient allocation through voluntary bargaining. Application of the Coase Theorem to intergovernmental relations suggests that when bargaining costs among local governments are low, they can correct for over or undersupplies of public goods. The implication is that it would not be necessary for governments to merge or consolidate in order to deal with spillover effects among neighboring jurisdictions. The possibility of voluntary agreements among governments to address spillovers has generally been dismissed in the public administration and urban policy literatures. I generally assumed transaction cost consist three kinds of cost: information, bargaining, and enforcement(North 1990; Blomely 1991) But this assumption is not sufficient for institutional collective action level because actors are not an individual but a local government as an institution. We add agency cost and division cost assumption to transaction cost assumptions (Feiock 2005). Five transaction cost assumptions are necessary for successful Coasian bargains but they are generally unmet (Inman and Rubenfield

1997; 2000):

1. ***Bargaining Costs*** - there are no, or small, resource costs associated with the bargaining process;
2. ***Information Costs*** - preferences over bargaining outcomes and resources are common knowledge;
3. ***Agency Costs*** - bargaining agents perfectly represent the economic interests of their constituents;
4. ***Division Costs*** - the parties can agree to a division of the bargaining surplus; and
5. ***Enforcement Costs*** - agreements are costlessly enforceable.

Even when bargaining costs are low, information, agency, division and enforcement problems might make interlocal agreements impossible. Information problems prevent governments from recognizing the potential gains from joint action. Joint gains do not guarantee cooperation will be forthcoming (Riker and Sened 1991). Information other local actors is critical to coordinating action for joint benefit and unless costs and benefits are common knowledge, all sides are likely to seek strategic advantage by concealing information. (Inman and Rubinfeld 1997).

To the extent that contractual agreements reveal valuable information about partners that is available to others, free rider problems reduce incentives to participate. Additional cooperative effort increases the information and reputation resources for all others in the network without any additional investment by the others. The decision-making process will be dominated by lack of individual incentive to contribute to the effort of the collective, and thus will lead to an underinvestment in regional efforts to resolve institutional collective action problems - the second-order collective action problem of institutional supply (Ostrom 1990).

The government officials that negotiate cooperative agreements are agents, thus, principal agent problems complicate collective action. Agency costs arise because the preferences of public officials negotiating interlocal agreements may depart from the preferences of citizens they represent (Feiock 2002). The extent to which agency problems are manifest has been linked to the structure, powers, and political security of public offices because these arrangements influence the value local officials place on cooperative ventures, their timing, and uncertainty in

their outcomes.

Even where officials pursue constituent interests with complete information, achieving agreement on formulas or procedures to allocate costs or benefits can be costly. The negotiation of equitable distributions of benefits will be affected asymmetries in preferences and political strengths between actors (Heckathorn and Maser 1987) and actors' risk preference and time preference (Bottom et al 2000; Feiock and Steinacker 2003). The greater the heterogeneity of the participants and the more clear-cut which party benefits most, the higher the political opposition to a cooperative solution may be. Actor with risk aversion or with high time discount rate might admit slightly smaller share of the pie, distribution of pay off from join a joint venture or coalition between/ among local government to reduce the risk (Bottom et al 2000). Mayors generally have higher discount rates and are more risk averse than manager as an experienced bargainer (Feiock and Steinacker 2003; Steinacker 2004) and division cost is lowers than local government with council-manager form of government.

Defection occurs if one or more of the parties do not comply with the agreement. Enforcement of interlocal agreements by the courts has been inconsistent (Ellickson 1979), thus enforcement will be costly unless there are credible commitments by the contracting parties to not defect. When jurisdictions are tempted to renege, there will be less incentive to reach agreement in the first place. State legal doctrines of nondelegation limit the capacity of localities to overcome contacting costs and the threat of strategic behavior. Dillon's Rule precludes local governments from engaging in activities for which they have not received explicit authority from the state legislature. Nevertheless, the courts have generally upheld interlocal agreements that have been challenged as violations of home rule provisions (Gillette 2001). What accounts for the cases of successful institutional collective action and interlocal cooperation described earlier? In some common pool resource situations, cooperative institutions have emerged to resolve common pool resource dilemmas when potential benefits of cooperation outweighed the transaction costs of forming new institutions (Ostrom 1994; Weber 1998(?); Lubell, Schneider, Scholz and Mete 2002). These examples share a configuration of community contexts, political institutions, and network relationships that reduced the political, economic and social costs of intergovernmental cooperation. Social capital in its various forms can reduce the costs of exchange in institutional collective action situations. Feiock (2005) argues that accounting for both the contextual and relational elements of collective action is necessary to understand

cooperation among local governments. The characteristics of the communities, the structure of local government political institutions and the formal and informal network structures in which local actors are imbedded determine the transaction costs of regional partnerships and joint ventures.

Characteristics of Communities

Similar to individual collective action we expect intergovernmental homogeneity in economic and demographic features across jurisdictions to indicate potential common interests and service preferences. State level rules, internal demands and exogenous contexts such as the geographic configuration of government units and their physical, demographic, and social characteristics shape the payoffs of cooperation for citizens, and their governmental agents. More serious service problem produce larger the aggregate gains from their resolution (Libecap 1989; Lubell, et. al. 2002; Ostrom 1990; Ostrom, Gardner, and Walker 1994). For example, we expect that communities experiencing economic hardship and/or with demands for large scale economic development will be most likely to cooperate in joint economic development projects with neighbors. City size is important because small governments may realize greater scale economies through cooperation. Because demographic homogeneity in a local government unit's population reduces agency costs for officials negotiating interlocal agreements on behalf of citizens, we expect intra-jurisdictional homogeneity will increase the likelihood of cooperation. Some communities may lack the capacity to engage in cooperative service provisions arrangements because of internal constraints such as union resistance or administrative concern about potential loss of local autonomy and control.

One of the most important contextual factors is geographic location. Fixed geographic borders require repeat play among neighboring jurisdictions, and thus reduce transactions costs by creating interdependencies. Governments with common borders are not stuck in a one-shot prisoner's dilemma; the impossibility of exit means defection from cooperation exposes the defector to retaliation. The prospect of future play with the same party constrains opportunism so it is then in the interest of each government to cooperate with neighbors who cooperate. This provides opportunities for mutual assurances that each government will contribute to the provision of the collective good.

Considerable research demonstrates that the welfare of suburbs is linked to the welfare of

central cities. In theory, suburbs should be willing to join collective action that assists the central city out of a desire to protect their own financial well-being (Savitch and Vogel 2000; Stein and Post 2000). Nevertheless, each has a self-interested incentive to withhold contributions and free ride on those of others, with the result that no one engages in the conduct from which all would benefit. If joint action is advantageous because of the geographic range of spillover effects, affected governments may only participate in the agreement if all affected governments are included.

Characteristics of Political Institutions

Government institutions are linked to successful interlocal cooperation because they shape the incentives faced by local government officials. Contracts offer incentives for efficiency, but may also motivate the parties to act opportunistically. Certain types of political system institutions can constrain risks of opportunistic behavior by local government officials (Feiock Jeong and Kim 2003). Both administrators and elected officials play a central role in forging cooperative alliances with other local governments but they differ in their bargaining resources and institutional positions. The political and career incentives of local leaders have implications for their attentiveness to the level and timing of collective benefits and willingness to enter into cooperative arrangements.

Political system institutions are directly tied to agency problems in negotiating interlocal agreements. The progressive reform “myth” of separation of politics and administration as institutionalized in reformed political structures is useful for resisting opportunism (Miller 2000). An appointed professional manager position can be efficiency enhancing because it replaces high-power political incentives with low-power bureaucratic incentives (Frant 1996). In addition, the professional standing and employment opportunities of city managers are improved by service innovations and a record of promoting efficiency at both the city and regional levels (Feiock and Clingermayer 2004).

Although elected officials are expected to be primarily responsive to internal constituencies, local officials within a region can be interested in election or appointment to regional or statewide office in the future (Bickers and Stein 2004). Alternatively, they may desire advancement within their political party or seek employment within the private sector after their term of office is complete. These motives can result in support for interlocal

agreements and efforts to promote regional interests. Gillette (2001) asserts that local officials electoral or private sector ambitions can lead local officials to address interlocal needs even in the face of weak internal demand (2001).

The link between form of government and the time horizons of local government decision makers is critical to understanding how political institutions can influence interlocal cooperation (Clingermayer and Feiock 2001). As long as future payoffs continue to be valuable, short-term gains from defection will outweighed by the long-term gains from continued cooperation. Interaction with other governments, and past cooperation between/ among city governments affect present and future cooperation because actors consider their reputation with other governments in the metropolitan area and value their networks. We consider these network investments a kind of cooperative norm or institutional level social capital that reduces transaction costs (Park and Feiock 2003).

Cooperation among local governments is more likely the longer the horizon of their relationship. In a repeated relationship, such as with geographically fixed government units, each actors stands to benefit by acquiring and preserving a positive reputation. In uncertain real world situations, the signal of reputation does more than compensate for incomplete information, reputation is a valuable social capital asset: building it up and maintaining it entail a short-run cost, and running it down or failing to maintain it yields short-run benefit (Dixit 1996). If the forces of repetition and reputation are strong enough, no explicit commitment mechanism is need to secure commitment: local governments' own incentives ensure that they will not tempted to defect from commitment. As a cooperative norm in metropolitan areas, reputation and commitment produced by network interactions provide considerable power to explanations of cooperation among governments in polycentric systems. Repeated relations are performed by informal and formal networks among local governments that reduce the transaction cost of investments in reputation making interlocal cooperation easier.

The Structure of Policy Networks

The formation of effective regional governance is constrained by the transaction costs of developing and maintaining contractual arrangements. The existing structure of formal and informal agreements among local governments reduces these transaction costs problems by increasing available information about each other's conduct specified in the agreements and

enhancing the credible commitments to fulfill those agreements. By spanning the metropolitan area interlocal agreements provide information about local governments' policies and programs in relation to others within the region and implementation problems. Regional governance, consisting of interlocal contractual arrangements, also increases credibility of commitments by transforming short term interlocal relations into repeated games in which a reputation for reciprocity and trustworthiness can mitigate problems of opportunism involved in a single interaction, especially with localities or organizations that are not located immediately across the jurisdictional boundary.

The institutional collective action framework posits that network structure of interlocal relations play a key role in the formation and the effectiveness of alliances or agreements.

Scholz, Feiock, and Ahn (2005) advanced two general propositions regarding the role of network structures in mitigating the problems of institutional collective action. One emphasizes tightly-clustered or "strong tie" relationships capable of enhancing the credibility of commitments among network members, which they called "credibility-clustering." The other emphasizes the role of extensive "weak tie" relationships linking diverse organizations in enhancing shared information required to coordinate collective decision, which they called "information-bridging." The credibility-clustering relationship suggests that the credibility advantage of a clustered network becomes increasingly important when there is a potential problem of shirking by local governments involved in the provision of collective goods. Threats of shirking impose costs on those who have already invested resources in collective efforts. Since interlocal cooperation can extend across many different service areas, a clustered network structure can reduce enforcement costs because information on the efforts, contributions and behaviors of a contacting government can be made available to and sanctioned by other potential partners. A highly clustered network has the ability to impose constraints on shirking and opportunism that increase the stability of a regional governance structure. A highly clustered dense network structure contributes to social capital by providing extensive monitoring mechanisms, and facilitating mutual reciprocity, trust, and conformance to the rules of the game (Coleman 1988).

Information-bridging links a unit with others that do not share contracts with common partners. This 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 highly clustered

network. This idea builds on Burt's theory of "structural holes" which argues that information bridging provides advantages when negotiating collaborative agreements.

In many instances, coordination of policy actions across a large number of units has the potential to increase benefits and performance for each government. In this situation City A might enter into a bilateral interlocal agreement with every other government to coordinate programs. Nevertheless, it is unlikely that the benefits of coordination would outweigh the transaction costs of involved in negotiating and maintaining multiple agreements. A multilateral agreement might provide more effective policy coordination, but, absent an existing organization or entrepreneur, City A would confront a free rider problem in constructing an organization or contract that would provide benefits for everyone.

Information bridging network structures may offer a more practical solution. City A will have an incentive to enter into an agreement to coordinate service activities with City B if City B has agreements in place with other communities (C and D) that A does not already have an agreement with. This argument builds from Granovetter's (1973) idea that extended ties increase individual benefits. In a dyadic relationship between governments A and B, the higher A's access to other local governments in the network that is controlled by B, the higher A's cooperation towards B.

Explanations for Cooperative Development Efforts

The institutional collective action framework predicts the occurrence of cooperative development activities will be a function of the anticipated gains from cooperation and the characteristics of local governments and their communities that influence the transaction costs of cooperation. The four types of social capital defined earlier provide mechanisms by which the political, economic institutional characteristics of local governments and the structure or relationships among them influence transaction costs. Regional partnerships and joint ventures differ in purpose, intensity and scope of participants thus I do not advance a single model. Instead I develop specific models derived from the ICA framework and incorporate some but, not necessarily all, of the elements of social capital to explain how local governments overcome commitment problems in their collective pursuit of economic development.

The payoff from collective action defines the collective incentives from regional

cooperation. Relative profitability needs to be high in order for collective action to be feasible (Begossi 1998; Warren and Pinkston 1998). Feiock (2004; 2005) contends the political, economic, and demographic characteristics of cities, their political institutions, and the structure of resource and contract networks are salient to local governments' interest in, and ability to engage in institutional collective action.

Intergovernmental homogeneity in economic and demographic features across jurisdictions indicates potential common interests and service preferences. State level rules, internal demands and exogenous contexts such as the geographic configuration of government units and their physical, demographic, and social characteristics shape the payoffs of cooperation for citizens, and their governmental agents.

Geographic proximity and fixed borders reduce transactions costs by creating interdependencies. Governments with common borders are not stuck in a one-shot prisoner's dilemma; the impossibility of exit means defection from cooperation exposes the defector to retaliation and provides opportunities for mutual assurances that each government will contribute to the provision of the collective good. Moreover, each benefit by acquiring and preserving a positive reputation. The increasing geographic density also create the economic and social strong tie between local governments, these tie create political incentives for local elected officials to cooperate (Post 2004). Geographical density of metropolitan area governments increase the likelihood that policy spill over will effect multiple local governments, creating incentives for cooperation (Post 2004, Netzer 1997).

Government institutions are linked to successful interlocal cooperation because the structure of property right and available options shape the incentives faced by local government officials. "Reformed" political system institutions constrain risks of opportunistic behavior by local government officials (Feiock 2004). Elected official, mayor are also fear loss of autonomy (LCIR 2001) and control (SEMCOG 2004) from interlocal cooperation.²

The existing structures of communication among development officials and formal agreements among local governments increase available information about each other's intentions and conduct and reputation. By spanning the metropolitan area these networks

² In addition, Public officials often worry about joint production arrangements due to the perception that service quality and quantity will change once the unit engages in a joint or contractual venture. Changing service take a some risk (SEMCOG 2004).

provide information about local governments' policies and programs in relation to others within the region and implementation problems. Interlocal contractual arrangements, also increases credibility of commitments by transforming short term interlocal relations into repeated games in which a reputation for reciprocity and trustworthiness can mitigate problems of opportunism involved in a single interaction, especially with localities or organizations that are not located immediately across the jurisdictional boundary.

Regional Partnerships

Accounting for both the contextual and relational elements of collective action is necessary to understand how and when regional partnerships are achieved. If there are great differences in prosperity between central city and suburban areas, they have different incentives regarding economic development. In that case regional cooperation is difficult to achieve or sustain (Steinacker, 2003; Feiock and Steinacker, 2003). The greater the underlying economic problems of a region the larger the aggregate gains from development, and the greater the likelihood of a cooperative arrangement to do so (Libecap 1989; Lubell, et. al. 2002; Ostrom, Gardner, and Walker 1994). Other demographic factors that vary across governmental units will have consequences for homogeneity of preferences of citizens and their governmental agents. Communications costs will also be higher and interests likely to be less uniform in heterogeneous than homogeneous groups (Gadgil et al. 1998; Sporrang 1998; Alcorn and Toledo 1998).

We expect the characteristics of the communities, the structure of political institutions and the formal and informal network structures in which local actors are imbedded to determine the transaction costs of forming and participating in regional partnerships. The institutional framework includes state level rules, particularly home rule provisions, that provide the legal basis for partnerships as well as the institutional alternatives for achieving development goals. Government institutions are linked to successful interlocal cooperation because they shape the incentives faced by local officials. Both administrators and elected officials play a central role in forging cooperative alliances with other local governments but they differ in their bargaining resources and institutional positions. The political and career incentives of local leaders can have implications for agency costs and their attentiveness to the level and timing of collective benefits and willingness to enter into cooperative arrangements. Gillette (2000) asserts that local

officials electoral or private sector ambitions lead them to be willing to address interlocal needs even in the face of weak internal demand (2000).

Based on previous work that has linked reform institutions to overcoming commitment problems (Miller 2002; Feiock, Jeong and Kim 200?) we expect communities with council manager government and at-large election to be more likely to participate in regional partnerships. The organization of government units is also critical. Coordination problems for collective action increase with the number of participants and the geographical distance separating government units. Following Olson (1965) we expect successful regional partnerships to be less likely as the number of governmental units in a metropolitan area increase³. We also expect the density of government units in a metropolitan area (Post 2004) and the proximity of individual units to each other to reduce transaction costs of cooperation.

Social capital among residents in a metro area is expected to be related enhance support for regional solutions to economic problems. For example, characteristics that linked to social trust such as residential stability and low crime rates are expected to enhance the formation of development partnerships. Weak tie networks among citizens within a metropolitan area, (i.e. individual level/structure social capital) that result from involvements in civic and social organizations are also anticipated to be positively related to regional partnerships. We expect homogeneity of political institutions across governments, particularly in the case of council manager government, to lead to formation of cooperative agreements.

The structure of networks among local governments in a metro area is expected to

³ Free-rider problem make hard to cooperate and provide collective good for ED. To illustrate this problem, suppose that in a metropolitan area of n local governments, each local government must choose a level of contribution, x_i , to public good. Let each local government's net benefit be given by

$$u_i(x_i, z-i) - x_i(r-1) + rz-i$$

where the variable r is some multiplier, and letting $z-i$ denote the total contributions of all actors except i . Clearly, if $r < 1$, i 's utility decrease as x_i increase. If $r > 1/n$, then everyone is better off at then-tuple(1,1,1...1) than at the n-tuple(0,0,0,...0). Hence, for $1 > r > 1/n$, the preceding game is an n person prisoner's dilemma.

Olson argues further that small groups are advantage compared to larger groups. Group's probability of entering the cooperation, in equilibrium, is $1-C/nB$. Thus, as n increase, the incentives for escaping dilemma weaken.(Ordeshook 1986, 222-224p)

influence the formation of regional partnerships and the position of a government in a network is expected to influence its participation in a regional partnership. At the metro level we expect regions with more interlocal service agreements among cities (a contract network) to be more likely to form regional partnerships. At the city level we expect communities with more frequent and overlapping contacts (resource network) with other local governments to be related to participation in regional partnerships.

Joint Venture with Other Local Governments

Recent research reports that interlocal service agreements in metropolitan areas are extensive (Thurmaier and Wood 2002) and most cities report at least one agreement (Agranoff 1989). The most frequently mentioned reason why local governments enter into interlocal agreements are economies of scale and cost savings for a local government not wishing to provide a service itself (ACIR 1985; Thurmaier and Wood 2002).

An economic development joint venture provides participating local governments with a chance to learn and benefit from one another and to achieve outcomes they could not achieve alone (Gibbs-Springer 2005). Joint venture is common collaborative strategy in metropolitan areas. According to the Connecticut Advisory Commission on Intergovernmental Relations (1990; 1996) there are numerous local government cooperative joint venture including airports, regional or inter-municipal job training programs, industrial parks, and joint industrial development activities.

I develop and a game theoretic model of joint ventures to guide the empirical analysis. The standard theory has been a static two person prisoner's dilemma (PD) model. Simple PD models can not adequately account for these outcomes because in institutional collective action the actors have the ability to change the constraints that they face through endogenous factors like reputation and trust which we call social capital. Axelord (1984) and Taylor (1987) argue that through the repetition of games, actors are made aware that they will meet their adversaries again in the future. This provides a rationale for players to choose cooperative strategies. Fixed geographic borders mean that neighboring jurisdictions must be repeat players. In repeated plays of prisoner's dilemma games, a player can achieve the benefits of the Pareto-optimal outcome with a strategy of "tit-for-tat." A tit-for-tat multi-period strategy is defined as playing the cooperative (dominated) alternative in the first play of the game (*the nice strategy*) and thereafter

mimicking the other player's previous choice (*reciprocity*) (Lubell and Scholz 2000, 2001).

We consider these network investments a kind of cooperative norm or institutional level social capital that reduces transaction costs (Park and Feiock 2003). Norms are clusters of expectations, or conditional preferences which thus depend on the preferences of others. Cooperative norms are a sanction that enhances commitment and facilitates cooperation of local governments (Axelord, 1995). In a repeated relationship, such as with geographically fixed government units, each actors stands to benefit by acquiring and preserving a positive reputation. Reputation is a valuable social capital asset: building it up and maintaining it entail a short-run cost, and running it down or failing to maintain it gets some short-run benefit (Dixit 1996). If the forces of repetition and reputation are strong enough, no explicit commitment mechanism is need to secure commitment: local governments' own incentives ensure that they will not tempted to defect from commitment.

Three person multi stages game model: City of Tempe, AZ located in the heart among 'City of Mesa', 'City of Phoenix', 'City of Scott Dale' and 'City of Chandler'. City of Tempe wants to build outlet mall to enhance their economic development. But Tempe didn't have a much resource to go alone and didn't have much free site for outlet mall. Effect of outlet mall on economic development has externality of benefit and cost to neighbor cities, for example benefit is increasing employment and property value, while cost is increasing congestion of traffic, etc. Tempe officials intend to internalized the positive externality and reduce the cost of development. City decided to collaborate with neighbor city. Tempe officials found some vacant site on the boundary of City of Chandler and City of Mesa and contact first with City of Chandler. All of these cities are member of Greater Phoenix-Mesa Regional Partnership. They have several experiences of interlocal cooperation for transportation and service delivery contracts. But Chandler also has a plan to build the south of city instead of north side. But city of Chandler agree to City of Tempe' plan and jointly build an outlet mall in 1996. Why city of chandler decide to jointly build outlet mall instead of building alone its south side. Static PD game don't explain this situations.

Three person multi-stages game is developed because local governments are geographically bounded by one or more neighboring governments and play a cooperative game with them in which withdrawal is an option because local government can switch the players to cooperate with (Tullock 1985; p1076). David and Holt (1990, 1993) developed this three person game and

applied it to reputation development. The model consists of a two person game with two stages: the first stage is a prisoner's dilemma, and the second is a 2*2 game with two, Pareto-ranked Nash equilibria. First we design the three-person two stage games in which there is one government that chooses which of the others to deal with in the current stage. David and Holt (1990, 1993) assumed a switch is costless in this two-stage three-person game, but it is not. Contracting cost can be significant.

Transaction cost includes the information, agency, division, and enforcement cost (Heckathorn and Maser 1987; North 1990). We assume the cost of cooperation or contract with other city exists and define it as C in Figure 2.

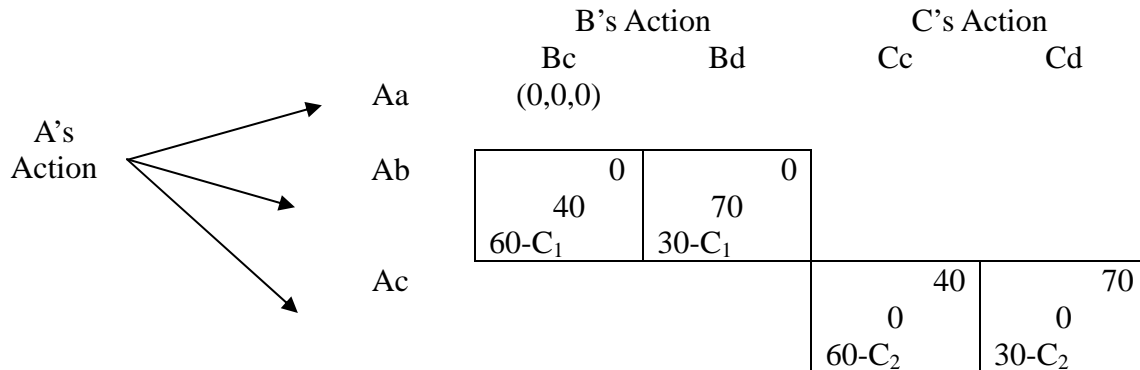


Figure 2. A Three Person Stage Repeated Game

We assume the cost of cooperation or contract for joint venture with other city exists and define it as C. C is transaction cost and B is difference between expected benefit from cooperation and actual invested money (economic cost). Consider the game figure 1, in which cities A, B, and C receive, respectively, the lower-left, middle, and upper-right payoffs in each box. If transaction costs for cooperation or contracting joint venture are less than benefits from cooperation, there is no interlocal cooperation or joint venture among local governments. Decisions are made simultaneously by all three city governments. In this game, city A chooses a strategy from three options; one is not to cooperate with B and C when transaction costs(C) are greater than benefit from cooperation with the other city. If city A makes decision Aa (doesn't

cooperate and doesn't make alliance with the other city), cities A, B, C don't earn any other benefit (0, 0, 0).

Each city's payoff from cooperation or joint venture is interdependent on other partner city's strategy and capacity. Decisions are made simultaneously by all three city governments. In this game, city A chooses a strategy from three options; one is not to cooperate with B and C when transaction costs(C) are greater than benefit from cooperation with the other city. If city A makes decision Aa (doesn't cooperate and doesn't make alliance with the other city), cities A, B, C don't earn any other benefit (0, 0, 0).

The incentive for each player to defect unilaterally in the first stage is assumed smaller than the reduction in payoffs that occurs when the result in the second period is smaller from dominant to the dominated stability results in the next period. A switch of this type can be interpreted as a punishment, and its effectiveness is not contingent on acceptance by the defectors. Moreover, the ability to switch to a new partner, leaving the other with reduced earning, is a more prominent threat than the types of threats identified with play in the two-stage games. In stage one of this game, Bd and Cd are dominant strategies. Suppose that the game in figure 1 is played twice, with all city players observing their own payoffs for the first play prior to the second and final play. In a two-stage game, the "cooperative" play of either Bc or Cc in the first stage can be part of an equilibrium strategy: city A chooses to deal with city B in the first stage and only switches after a defection. City A thinks $\$60 - C_2$ gain from cooperation with C is greater than $\$30$ from city B. The strategy for city A may be to select city B (Ab decision) in the first stage and to stay with city B unless Bd is observed or C_2 is greater than $\$30$ ($\$60 - \30). We assume if city A switches partners, he/she pays the transaction cost of bargaining a new contract. The respective strategies for player B and C city are to choose cooperation (Bc and Cc) in the first stage and to choose defection (Bd and Cd) in the second stage. In this case, the gain of 30 that B could realize by defecting in the first stage is more than offset by the cost, 70, of not being selected in the final stage. For example, if we expand to a 3 stage game, if city B plays a straight defect strategy then a switch from city B to city C would increase A city's expected payoff if city C cooperates in the second stage ($\$60 - C_2 + \$30 = \$90 - C_2 > (\$30 * 2 = 60\$$ if C_2 is less than 30). City C learns from the A-B game, and cooperates in the first stage because the gain from Cc-Cd strategy of $\$110$ is greater than $\$70$. Multi-stage variants of this game have the advantage that city B and city C can see whether city A will punish defection in the early stages.

This three-person multi-stages game suggests why interlocal cooperation (entering joint venture) might frequently emerge in fragmented metropolitan areas. This game suggest two important factors to explain interlocal cooperation: First, a switch to a punishment and stay-to-reward strategy is able to successful and effective when the game is iterated more than once (Davis and Holt 1993). For example, if we expand to a 3 stage game, if city B plays a straight defect strategy then a switch from city B to city C would increase A city's expected payoff if city C cooperates in the second stage ($\$60 - C_2 + \$30 = \$90 - C_2 > (\$30 * 2 = 60\$$ if C_2 is less than 30). City C learns from the A-B game, and cooperates in the first stage because the gain from Cc-Cd strategy of \$110 is greater than \$70. Multi-stage variants of this game have the advantage that city B and city C can see whether city A will punish defection in the early stages.

This sequential Nash equilibrium is weak since A's second-stage pay-off would not be any lower if the threat to switch following defection were not carried out. In the real world, relations between/among local governments extend more than the two stages described above. In this way, cooperative outcomes might develop as a consequence of a city developing a reputation for employing a punish/reward strategy. The more repetition or reciprocity increase the defection cost of cooperation. The second, switch to a punishment and stay-to-reward strategy for cooperation is able to successful and effective when actors communicate successfully and efficiently and have the lower transaction cost. This game suggest that information and reputation are important factors for contracts among decentralized local governments because neighbors that are potential service partners also consider a city's reputation, capacity and strategy. The efforts of local governments to developing and maintaining reputations are influenced by "reputational externalities" (David and Holt 1993). Credibility, trust or trustworthiness cumulated from contact in a repeated through strong tie network. It reduces the monitoring (commitment or enforcement) cost of ex-post transaction cost(C) to be caused by opportunistic behavior (Williamson 1975). Information and reputation have diffused through weak tie network among local governments. It reduces the information seeking cost or coordination (bargaining) cost in ante-transaction cost to be caused by bounded rationality (Williamson 1975). Institutional level social capital reduces both types of transaction cost. Therefore network characteristics like structure and position of local governments are important in this case. Based on the N-person repeated stage model, we hypothesize the denser and stronger-tie network developed from prior contract with other local governments and the more

efficient and effective weak tie resource network, the less transaction cost and the more likely agreements will be forged between/among cities on economic development issues.

If cities confront low transaction costs they seek out a new economic development partner and easily ally other local governments because of the ease of acquiring reliable information and signals of reputation of the other governments. Good information reduces uncertainty and monitoring, bargaining and enforcement cost (North 1990). A benefit from networks is reduction of incomplete and asymmetric information that rewards defection in the game described above. There are two hypotheses. One is information-bridging hypothesis, actors with more bridging connections are more likely to participate in a greater number of joint venture. Information advantage of bridging networks is particularly important during initial stage of developing joint ventures. Bridging links allow local governments not only discover a broader set of possible gain from others in a policy arena, but also to control information flow and hence shape joint agreements to the actor's advantage. From transaction cost perspective on contract (Heckathorn and Maser 1987), the information advantage of bridging networks help reduce the costs of developing joint venture, information control provide an advantage in negotiating contract.

The second is credibility –clustering hypothesis, tightly clustered community provide extensive monitoring and punishment opportunities that enhance the credibility of commitments to the rules of the community by network members (Ostrom 1990). Clustered network increase the number of actors who could at least potential observe and punish shirking, and shared belief and mutual reciprocity enhance credibility that punishments would indeed be imposed even when costly to the punisher.

When governance problems involve service coordination to reduce allocative inefficiencies, extensive networks with “weak-tie” relationships that link diverse institutional actors and enhance shared information required coordinating collective decisions. Where governance problems involve distributional disparities or spillovers, network closure and tightly-clustered “strong-tie” relationships enhance the credibility of commitments among network members and thus cooperation in collective burden sharing agreements among local government (Schneider et al. 2004).

Based on this model we expect interlocal cooperation on economic development and transaction cost to be influenced by the characteristics of communities, political institutions, and

networks (Social capital).

Unquestionably the most important characteristic in development cooperation is geographic location. Geographic proximity to other local governments affect local governments cooperation like joint venture (Post 2004; Morgan and Hirlinger 1991). Local governments are placed-bounded; they can not mobile. Therefore, local governments have limited potential partner and generally cooperate with geographically proximate governments (special neighbor local government). An example of this is when Queen Creek, AZ and Gilbert, AZ entered into an interlocal agreement to set mutual boundary in an unincorporated area so that a major residential development, golf course and resort could be built on more than 1000 acres of straddling the boundary (Springer 2005). Distance might critically reduce the cost/benefit ration often associated with contracting (Post 2004). Hence cooperative actions with actors beyond direct neighbors can be more costly. According to Burt (1999), as N increases, monitoring the other players in more difficult, and cooperation is less likely because of increasing information cost. But N person-N stage game suggest that an existing the third party or alternative partners change the game structures and pay-off from monopoly to competitive market pay-off. It can reduce cost. And the probability of cooperation increase because of expanding their choices. The greater number of neighboring local governments signals an increase in the higher probability of opportunities for joint venture cooperation with other city.

The amount of financial resource available to local government is important factor to entering joint venture. Olberding (1997) and Bennett & Nathanson (1997) found financial resources on the part of local governments need to match funding for inter-local cooperation like joint venture. However, Ehrenhalt (1995) argued that cities with limited financial resources are motivated to joint venture and collaborate on financing and providing public services to reduce the costs. Local governments has fiscal problem but need to provide publics service. In this case, cost-saving from joint production and provision is an incentive generating economic and political benefits to governments and elected officials. Some scholar have found the greater economic needs, the more likely the development and implementation of strategy to address those needs (Peterson 1995; Dye 1990).

Fisher (1990) concludes that economies scales are the impetus for most service contracts and interlocal agreements. Economies of scale were cited as a reason for cooperation by 52% of the local governments using contracts and by 51% of the governments participating in interlocal

joint agreements (ICMA 1988). A second reason was that it was “more logical to organize services beyond jurisdictional or area limits.” This suggests larger service areas reduce benefit spillovers. Many economic development activities require large investment for building social infrastructure and thus may be produced more efficiently through joint efforts. City size is important because small governments may realize greater scale economies through cooperation

In some cases, a size is requirement to need to be acquired the state and federal grant for ED because of economic of scale efficiency. For example, the program (formerly known as the WHEAT program) is operated on a regional basis because no one town has sufficient number of eligible participants to meet the Department of Labor’s (DOL) threshold grant application requirement. Based on this argument, we *hypothesize “the smaller size government, the more likely to enter joint venture with other local government”*. Some scholars argue that communications costs will be higher and interests likely to be less uniform in heterogeneous than homogeneous groups (Gadgil et al. 1998; Sporrang 1998; Alcorn and Toledo 1998). Ostrom(1998) also asserted that the greater similarity among parties’ resources, the more that they have common, the easier it is to reach agreement on goal and strategies, and thus the more likely cooperative behavior is achieved. Homogeneity decreases C in the Three Person multiple stage game. However, others argue that difference in resources or capacity among parties can create a need for cooperation called “strategic interdependence” (Gulati 1995; 621). Burt (1990) also argues that heterogeneity increases the social capital and cooperation because partner have what I don’t have. If two local governments have similar industrial structure, there are two possible scenarios; one is they feel each other competitive or they seek similar economic policy and project and cooperate each other. Race, economic situation, economic structure, size, and political institution of difference are all influence entering joint venture for ED.

Government institutions are linked to successful interlocal cooperation because they shape the incentives faced by local government officials. Contracts offer incentives for efficiency, but may also motivate the parties to act opportunistically. Certain types of political system institutions can constrain risks of opportunistic behavior by local government officials (Feiock 2004). Although elected officials are expected to be primarily responsive to internal constituencies, local officials within a region are often interested in election or appointment to regional or statewide office in the future (Bickers and Stein 2004). Alternatively, they may desire advancement within their political party or seek employment within the private sector

after their term of office is complete. They can create support for those efforts by promotion of regional interests. Gillette (2000) asserts that local officials electoral or private sector ambitions lead them to be willing to address interlocal needs even in the face of weak internal demand (2000).

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

This chapter describes the methodology and data used to test two models of institutional collective actions for economic development of local governments; 1) social capital based theory of regional cooperation to regional partnerships for economic development and 2) transaction cost and network based theory of interlocal cooperation to joint venture for economic development.

In the beginning of the dissertation, I raised the question of what factors make local governments cooperated each other for economic development in the real world. Why regional partnerships for economic development emerge in some metropolitan areas and not others? Why some local governments cooperate for creating joint venture to encourage economic development and others not?

Two analytical approaches are used to test my models. The two models have different unit of analysis: metropolitan areas and local governments.

My first model investigates what action arenas and action situations lead to the emergence of regional cooperation and institutional collective action. This analysis examines the formation of regional partnership for economic development in metropolitan area. The second model of institutional collective action focuses on the local government as actor in a cooperative game. This set of analyses focuses on the formation of interlocal joint venture to encourage economic development. Each of these is discussed in more detail in the following section.

The first section of this chapter outlines the research design including variables as well as data that used to examine formation of regional partnership for economic development and social capital. The second section describes the variables and data used in interlocal joint venture for economic development model analysis.

Stage 1: Formation of Regional Partnership

Unit of analysis

Ostrom (1999) suggest the institutional analysis and development (IAD) framework to explain of collective choice decision making. She defined action arena as “the social space where individuals interact, exchange goods and services, solve problems, or fight” (Ostrom 1999: 42p). The action arena is where local governments and the other actors interact with other actors to achieve economic development outcomes and benefits.

Approximately 84% of the nation’s population resides in metropolitan areas. Metropolitan areas have grown rapidly in number and size. Most economic activity occurs in a metropolitan area. Metropolitan regions are the smallest scale at which it is possible to take most of the critical flows and meaningfully settle problems in an integrated and holistic approach. At the same time, the metropolitan area might be the largest geographical unit which people can grab and around that they can come together and build up a sense of belonging (Parzen 1997).

But Orfield(1997: 105p) asserted “there is growing recognition that the problems of segregated metropolitan areas- declining neighborhoods, congested highways, degradation of valuable natural resources and wasteful intra-regional competition- can not be addressed through the action of individual local governments working alone”.

U.S. metropolitan area system is particular; in comparison to similar areas in most other countries, U.S. metropolitan areas are characterized by large numbers of local governments (Weither, 1991: 176). In 1997, the average metropolitan area consisted of 114 local governments: 2 counties, 42 municipalities or towns, and 70 special districts, of which 21 were school districts. There were 18 local governments of every 100,000 people in metropolitan areas (Bicker and Stein 2003). U.S. Metropolitan area system is decentralized polycentric system without central authority. They are fragmented and too many governments and not enough governments (Ostrom 1969).

Metropolitan areas are our units of analysis. The general concept of a metropolitan statistical area (MSA) is that of a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. The United States Office of Management and Budget (OMB) define metropolitan and micropolitan statistical areas according to published standards that are applied to Census Bureau

data. Currently defined MSA is

Metropolitan Statistical Areas (MSAs): The U.S. Office of Management and Budget designates MSAs to be used as standard areas in the reporting of data for qualifying metropolitan regions. A MSA defines a county or group of counties having a large population center and economic ties to adjacent communities. To be designated a MSA, the area must either have a city of 50,000 or more inhabitants, or have an urbanized area of 50,000 inhabitants and a total MSA population of at least 100,000.

Consolidated Metropolitan Statistical Areas (CMSAs): Metropolitan Areas that contain one million or more persons and meet other criteria are designated as CMSAs. They are separated into smaller areas (PMSAs). For example, in Illinois, the Chicago-Gary-Kenosha area meets the CMSA criteria.

Primary Metropolitan Statistical Areas (PMSAs): PMSA is subdivision within consolidated metropolitan area. Such an area, of 1 million or more people, can be divided into PMSAs. The smaller areas which comprise CMSAs are designated as PMSAs. For example 1992, the Chicago-Gary-Kenosha CMSA is comprised of the Chicago, IL; Kankakee, IL; Gary, IN; and Kenosha, WI PMSAs (Census 1996)

Our data set include population data for the 273 metropolitan areas described above (245 MSAs, 17 CMSAs, and 11 NECMAs used as MSA/CMSA substitutes) defined as of June 30, 1996 (Census 1996)⁴

⁴ As of the June 30, 1996, OMB announcement, there are 255 MSAs, 18 CMSAs, 73 PMSAs, and 12 NECMAs in the United States. In addition, there are 3 MSAs, 1 CMSA, and 3 PMSAs in Puerto Rico not covered in this publication. This publication also excludes the 10 MSAs, 1 CMSA, and 15 PMSAs defined in terms of cities and towns in New England. Included are 332 MAs: 245 MSAs, and 17 CMSAs, located outside New England, as well as the 12 NECMAs. Ten of the 12 NECMAs substitute for the 10 New England MSAs; one NECMA substitutes for the Boston- Worcester-Lawrence, MA-NH-ME-CT CMSA, which is composed of 10 PMSAs; and the last NECMA substitutes for the 5 PMSAs in the Connecticut portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT-PACMSA. minus the semi-independent incorporated places.

Dependent Variables and Data

Urban scholars (Feiock 2004; Adams 1997; Agranoff and Mcguire 2003) have argued that global competition in exporting goods and services absolutely requires cities and suburbs to cooperate within regional frameworks.

Regional Partnership for economic development is regional governance and non-profit organization for economic development. This kind of governance has formed rapidly after 1990 because of 'globalization' and 'new regionalism'. By contrast old regionalism, the new regionalism stress on collaboration and voluntary agreement among equals.

Olberding assembled a listing of regional partnerships formed by 1997.

Regional partnerships were identified using a systematic and extensive search process. First, *Site Selection's* 1998 listing of economic development groups was reviewed to identify those which are regional in scope. Second, the *Worldwide Chamber of Commerce Director's* 1998 listing of economic development organizations was reviewed to identify those which are regional. Third, *Trends in Economic Development Organizations: A Survey of Selected Metropolitan Areas* published by the National Council for Urban Economic Development in 1995, was reviewed to identify regional organizations. Fourth, a search of internet web sites was conducted using various combinations of key words such as "regional" and "economic development" Finally, state economic development departments were called to interview officials who work with local governments and ask them if any organizations in the state fit the definition of regional partnerships for economic development (i.e., organizations or networks of governmental officials — and often business leaders and other individuals - to facilitate cooperation on enhancing the economy of a multijurisdictional area). Some state officials provided information over the telephone while others sent lists of regional partnerships via a facsimile machine or the postal service. This search process identified 194 regional partnerships for economic development in 150 metropolitan areas (Olberding 2000: 153-54).

I extended the listing of partnerships in 1997 assembled by Olberding (2000: 153-54)

through 2004 based the resources of Site Selection Inc., the International Economic Development Council, and online web sites searches by Google.

But Olberding(2000) identified and include regional partnership which is not covered all metropolitan area. Some regional partnership covers some metropolitan areas. For example, Denver metropolitan areas has several regional partnership which are ‘Metro Denver economic development corporation’, ‘The Erie Economic Council’, ‘Greeley/Weld Economic Development Action Partnership’, ‘The Parker Economic Development Council’, and ‘South East business Partnership’. But, Metro Denver economic development corporation is only real regional partnership for economic development covered most of Denver metropolitan area and others covers only small areas in Denver metropolitan area.

In this dissertation, regional means covering most metropolitan area. I defined regional partnership for economic development which not covers only small areas in metropolitan areas but it covers most of metropolitan areas. Therefore I identify just one regional partnership which covers most metropolitan area.

In addition, we identified the date which partnerships were formed in order to exclude partnerships that were in existence prior to 1990. I also collected data established regional partnership before 1990. And REGIONAL PARTNERSHIP data measured whether metropolitan area has regional partnership or not. In contrast the decline of consolidated metropolitan government strategy, the use of targeted regional strategies has been on a steady emerged since late 1980’s and early 1990’s. Since the early 1990s, there has been a dramatic resurgence of regional cooperation for economic development and regional planning in U.S. metropolitan areas. Before 1990, some metropolitan areas have regional economic development organizations or agencies. But there is difference between old style economic development corporation (EDC) and newly emerged regional partnership after 1990. Old style regional cooperation is just implementation agency which was created by chamber of commerce. Federally mandated regional planning council took a role of regional policymaker and coordinator. Dodge (1990) argue that “the federally mandated regional planning efforts and consolidation proposals of the past three decades are being replaced by voluntary cooperation among local governments and sectors through public-private, ‘intercommunity partnership’” (Dodge 1990; 354p). New style of regional partnership is voluntarily coalition among governments, private sectors and public sector. New regional partnership is not only economic development implementation agency or

non-for profit organization but also policy network for economic development. It represents form of regional governance. It is dedicated to developing broad-based, long-term strategies for regional problem solving strategies and coordination benefit and cost of regional cooperation for economic development that go beyond the limits of special interests and politics through active engagement of stakeholders. Much old style regional partnership has changed or evolves to new style regional partnership. For example, the Chamber founded the Greater Denver as old style regional partnership in 1987. The Metro Denver Network succeeded the Greater Denver Corporation in 1995. Metro Denver Economic Development Corporation (Metro Denver EDC) was born. The Metro Denver EDC is consist of 60 counties, cities, and economic development agencies from throughout the seven-county Metro Denver area and Greeley/Weld County, Colorado (Metro Denver EDC web accessed 2004). They reported “*Member organizations serve as account representatives for the entire region. They tell clients and companies the benefits of Metro Denver first and individual communities second. No matter whom you contact, the entire Metro Denver region is at your disposal*” (Metro Denver EDC web accessed 2004 <http://www.metrodenver.org/>).

Dependent variable in this model, formation of regional partnerships, is measured by whether or not a regional partnership which covers all metropolitan areas for economic development was established in a metropolitan area between 1990 and 2004. This dichotomous variable, REGIONAL PARTNERSHIP equals 1 if a metropolitan area had adopted at least one regional partnership for economic development and equals 0 if a metropolitan area did not.

Measures of Social Capital

The analysis includes measures which capture the four categories of social capital defined in the previous chapter.

Institutional /cognitive(endogenous) social capital (INSTITUTIONAL COOPERATIVE NORM) refers to interactions that build cooperative norms among local governments. I include a measure of interlocal agreements to indicate institutional corporative norms among governments in a metro. I calculate the number of municipal governments and counties receiving intergovernmental revenues from other local governments in the metro area from the 1992 *Census of Government Finance* and divided by number of municipal governments and county

government. INSTITUTIONAL COOPERATIVE NORM is measured by the percent of local government with intergovernmental revenue from other local governments.

Individual level /cognitive(endogenous) social capital is indicated through measures of social trust. Crime is expected to decrease social trust and to have a negative relationship with social trust. Following previous research, crime rate as SOCIAL TRUST was measured by the mean value of the rate of serious crime per 10,000 residents⁵ in 1990, 1994, 1996 and 2001. This data collected by the state and metropolitan area data book 1997-1998, U.S. Census website (www.census.gov), and Report from Federal Bureau of Investigation (FBI). In addition, we also include the percentage of homeownership in the metro areas for 1990 as suggested by Krishna (2002). According to Putnam(1995), and DiPasquale and Glaeser (1999), homeownership is positively related to residential stability, which in turn is positively associated with social capital, because it gives households an incentive to invest in their community (Glaeser and Laibson, 2000). They found evidence homeownership positively influenced economic development cooperation because it increased community tenure. Homeownership rate data collected from 1990 census data.

Individual level /structure(exogeneous) social capital is an exogenous form of social capital. Putnam (2000) and Coleman (1990) conceive of social capital as resources inherent in relationships among members of groups or communities that are productive for social solidarity. In this perspective, membership of voluntary associations is often regarded as an indicator of social capital. The analysis includes measure of networks in the citizenry, the number of civic and social associations, and other membership organization and associations⁶ per 1000 resident as reported in *County Business Patterns 1997*.

Institutional level /structural(exogenous) social capital (RULE/ LAW) is regarded as exogenous social capital. The first measure of exogenous institutional factors is state laws that

5 Serious crimes are 1)murder and non-negligent manslaughter, 2)forcible rape, 3) robbery, 4) aggravated assault, 6) burglary, 7)larceny-theft, and 8) motor vehicle theft (County and City data book. 1994)

6 These include Business, Professional, labor, Political and similar Organizations.(U.S. Census Bureau, 1997 Economic Census)

encourage or discourage intergovernmental cooperation. First I assume city and county with home rule has more discretionary power to solve their problem by themselves and they are freer from state authority and they are more easily to cooperate each other. But unfortunately, 91.9 percent of cities within metropolitan area have home rule charter. Other institutional factors may discourage cooperation among local governments in metropolitan area instead of encouraging cooperation. To capture this I construct an index of state constraints on local government. First I collect the data state constraint on local government annexation and incorporation to measure macro level structures. This index consists of four factors: the whether the incorporation-minimum population required by state or not, incorporation-minimum area required or not, incorporation-minimum distance from existing units required or not, and incorporation-minimum ad valorem tax required or not by state law. Each variable is dichotomy variables. We sum up these four variables and create a index of state constraints on local government annexation and incorporation. In addition, I add one more index; the scope of interlocal service agreements authorized by general law or by state constitution in 1990. This data collected from survey by U.S. Advisory Commission on Intergovernmental Relations. 42 U.S. states have this restriction excluding 8 states (Alabama, Delaware, Hawaii, Idaho, Iowa, Massachusetts, Minnesota and North Dakota). This institution also restricts the interlocal cooperation among local governments. The maximum value of constraint is five and the minimum is zero.

We also consider the collective action and cooperation problems based on the transaction cost and collective action theories. The number and heterogeneity of participants play an important role in collective action (Olson 1965; Ostrom, 1990). Groups should be small to decrease coordination costs. Also, communications costs will be higher and interests likely to be less uniform in heterogeneous than homogeneous groups (Gadgil et al. 1998; Sporrang 1998; Alcorn and Toledo 1998).

Measures of Characteristics of Community (Metropolitan Area)

Size of metropolitan area and fragmentation: Groups should be small to decrease coordination costs. Coordination problems for collective action increase with the number of participants. We include a measure of the number of participants as indicated by the total number of municipal and county governments in each metro area. We initialize this variable as SIZE OF GROUP. Data for this measure is collected from 1992 Census of Governments. The number of

general purpose governments, which include cities, towns, counties, and consolidated city-county governments, within Metropolitan areas is high variation with from two (Laredo TX MSA) to as many as 363 (New York-Northern New Jersey-Long Island, NY- NJ-CT-PA CMSA/NECMA). This variation is somewhat depend on the population size and land area of Metropolitan area. Bicker and Stein (2003) measured fragmentation of local government on the basis of the number of general purpose local governments per 10,000 people within each MSA. But we think the number of participation is more relevant to measurement because total participants number N affect transaction of institutional collective action as I explain chapter 3 rather than density of government.

Geographical density (DENSITY): The geographic density of metropolitan area governments also affects the lifestyle of metropolitan area residents to live, work, and recreate across and in multiple communities (Post 2004). Post (2004) found geographical density of metropolitan area affects positively strong local intergovernmental agreements. The geographical density variable is measured by the population per square mile in 1990.

Economic Statuses and needs: I assume that metropolitan area with relatively lower economic status will have stronger demand for economic development. That case, political entrepreneur like mayor and council members of local government cooperate more to encourage regional economic development strategies although they accept some loss of bargaining (Fairbairn 2004;Merret & Waltzer 2004; Fulton 2004). Previous my research (2004) of regional partnership, unemployment rate is my measurement of economic statues of metropolitan area. Mayor or council members as political people are sensitive to unemployment rate rather than other kinds of economic index. But some scholars used median household income, average income, etc as other economic statues measurement. I include a metropolitan prosperity index calculated by Lewis Mumford Center in 1990 because this measurement includes most of important economic index. This measurement explains detail in Appendix B. Shortly explaining how to measure this metropolitan area's prosperity index in here,

Prosperity index value combines nine socioeconomic indicators which are median house hold income, per capita income, rate of below poverty people, unemployment rate, % of college graduated, rate of homeowner, % of vacant

house, % of managerial and professional specialty occupations and calculate a standardized score (creating a Z score) on every indicator (based on the 1990 mean and standard deviation). For those indicators where a higher value means a less healthy region (poverty, unemployment, housing vacancy), we took the inverse of the score by multiplying by -1. Then all the indicators were summed and a ranking was assigned. - with a higher score leading to a higher (better) rank. This score is an overall prosperity index value, where a higher value indicates more prosperity. (Mumford Center web: <http://mumford1.dyndns.org/cen2000/CityProfiles>).

Homogeneity and heterogeneity: In metropolitan area study, many scholars focus on the inequality between central city and suburban area.

The HOMOGENEITY of metropolitan demographic measured the percentage of white-non Hispanic people in the population. This race homogeneity variable presents preference of economic policy of metropolitan area to be a similar, and increase the cooperation. Data for this measurements of homogeneity are calculated from 1990 Decennial Census data.

The payoff from collective action defines the collective incentives from cooperation. Relative profitability needs to be high in order for collective action to be feasible (Begossi 1998; Warren and Pinkston 1998). If there are greater socioeconomic status between central city and suburban areas, they have different incentives regarding economic development. In that case cooperation is difficult to achieve or sustain (Steinacker, 2003; Feiock and Steinacker, 2003).

To measure HETEROGENEITY of socioeconomic status in metro areas, I calculate absolute value of differences between standardized values on a prosperity index for the central city and suburban areas in each metropolitan area. I already explain how to measure index for the metro region, city and suburb prosperity above economic status and need variable part.

To calculate the index for city-suburb disparities, we first created ratios of the city value to the suburb value for each variable, then standardized these, corrected their direction, and summed the values (Lewis Mumford Center Web <http://mumford1.dyndns.org/cen2000/CityProfiles>).

I explain the detail of how the component variables were measured in an appendix B.

And I also measure the race heterogeneity variable by absolute value of difference between percentage of white-non Hispanic population of central city and suburban area in 1990. This data also collected Mumford center data archives based on Census 1990 data.

Measures of the Metropolitan Structure

Single central or multi-central city: If metropolitan area has more than one central city, they may compete for economic development policy leadership making it harder to form a regional partnership. The data on principal cities in MSAs were collected from 5th edition of state metropolitan area data book 1997-1998. Census define principal city in MSA like this:

The largest city in each metropolitan statistical area is designated a "principal city." Additional cities qualify if specified requirements are met concerning population size and employment.⁷The title of each metropolitan statistical area consists of the names of up to three of its principal cities and the name of each state into which the metropolitan statistical area extends. Titles of metropolitan divisions also typically are based on principal city names but in certain cases consist of county names (Census 1996).

First I measured metropolitan structure as whether it was a single-central or multi central city metropolitan area. I measured number of central cities in a metropolitan area. These data were collected from the 1990 Census. Seventy-six metropolitan areas (28.1%) have one more central city.

Span of metropolitan area (Multiple state or not): The other metropolitan area structure variable is whether a metropolitan area is located in one state or two or more states. Thirty-three metropolitan areas, 12.2 % of total MSAs, are located across two more states. The important thing is if a metro area spans two or more different states, each state wants to capture the development resources available. The vertical linkages needed for regional cooperation have not received the attention they deserve as our major metropolitan regions (Adams 1997). In addition, each state has different rule and law and it increase the transaction cost of interlocal cooperation

⁷ The specific requirement address on Appendix B.

(Adams 1997). This variable is measured by number of state MSA located in 1996. These data were collected from 5th edition of state metropolitan area data book 1997-1998.

Stage 2: Joint Venture with Other Local Governments for Economic

Unit of Analysis

In order to examine the influence of community, institutional and network characteristics on strategic choices to enter into a joint economic development project or venture with another government, I employed data collected from a nationwide mail survey of city governmental officials responsible for economic development activities and networks.⁸ In fall of 2004 questionnaires were mailed to the lead development official in the 522 U.S. cities with populations over 50,000 in 1990. To date responses have been received from 221 cities, a response rate of 42.3%. Additional data on political system characteristics was collected from surveys conducted by ICMA survey data, various volumes of the Municipal Year Book, municipal web pages. Calls were then made to the city clerks if data were not available electronically. Community demographics were gathered from the 2000 Census of Population, online Census data reports, and data extracted from the Lewis Mumford Center online archive. Land area and geographic data were collected from the city-data.com web site. 1.

Table 1 compares characteristics of survey respondents with the population of cities with populations over 50,000 from which they were drawn. The sample of survey respondents is generally representative of all cities with populations over 50,000 in terms of region, but cities with mayor council governments and large populations are somewhat under-represented as reported in Table 1.

⁸ This survey is part of a study of local government economic development policy sponsored by the National Science Foundation and endorsed by the National League of Cities.

Table1. Comparing over 50K city population and sample

	POPULATION (N=554)		SAMPLE (N=221)	
	<i>Mean</i>	<i>(SD)</i>	<i>Mean</i>	<i>(SD)</i>
Population 2000	181348	(437890)	129447	(129255)
Land Area 2000 (Per square mile)	60.15	108.03	50.09	(61.27)
Median Income	36899	(9940)	45511	13592
% of White Population	67.63	(18.94)	72.17	17.90
	<i>Frequency (%)</i>		<i>Frequency (%)</i>	
Form of Government (% of Council-Manager)	331 (63.2%)		153 (69.2%)	
NORTHEAST	73 (13.9%)		24 (10.9%)	
MIDWEST	135 (25.85)		46 (20.8%)	
SOUTH	141 (26.9%)		62 (28.1%)	
WEST	175 (33.4%)		89 (40.3%)	

Variables and Data

Dependent Variable: Alliances or joint ventures with another local government(s) provides a novel measure of voluntary interlocal cooperation that involves critical exchange, sharing, or co-development and can results in enduring commitment between partners (Feiock 2004). The dependent variable is measured by responses to a survey question asking whether the respondent’s local government “*has engaged in joint ventures with other cities to encourage development.*” Seventy of the 221 respondent cities (31.6%) engaged in one or more joint venture with neighboring jurisdictions to promote economic development.

Characteristics of Network: Recent work has adopted measures of networks that typically involve counting contacts and interactions within the network (Agranoff and McGuire 1988; Meier and O’Toole 2001, Provan and Milward 1991,1995). I identify three types of network linkages.

One is the strong-tie resource network. Strong tie resource networks exchange information

through direct relationships with other local governments. I measure strong-tie resource networks based on the frequency of contacts with other local governments as indicated by responses to a survey question that inquired about “*the frequency of interaction your local government has with officials/agencies in other cities regarding economic development.*” Interaction frequency is measured on a 5- point scale ranging from no contact to weekly or more frequent contact. This measure differs from those used in the existing literature because it captures the strength, not just the presence, of these linkages.

The second type of network is the weak-tie resource network. Mintrom (1997) and Mintrom and Vergari (1998) argue that information and innovation diffuse through organizational professional networks. Participation in weak-tie resource networks is measured by question asking whether their governments participates in a “Regional Council or Regional Development Partnership or not” If they participate in metropolitan regional council or regional partnership, they have easier access to information regarding neighboring local governments that are potential partner for economic development projects. This can reduce transaction cost in interlocal cooperation. Of the 222 respondents 171 cities (77.4%), participate in and support financially a county-wide or regional economic development organization.

The third network is a formal contract network. Over time embedded relationships with other local governments (Granovetter 1985) accumulate into a network that invests the reputation and reciprocity of information on the reliability and competencies of prospective partners (Gulati and Gargiulo 1999). Contract networks are measured by the percent of system maintenance (infrastructure and development) intergovernmental revenues that are derived from other local governments in the metropolitan area as reported in the 1997 *Census of Government Finance*. Rawlings (2003) categorized governmental expenditure into by “General and Administrative”, “Lifestyle”, and “System Maintenance” by service function⁹. According to her classification, system maintenance categories include highway, sewerage, utilities, and transit system. Housing and community interlocal expenditure is under lifestyle issues (Rawlings 2003). But I identify

⁹ There is some difference of incentives to cooperate by type of public service. Williams (1971 in NRC 1999) classified two issues related to the interlocal cooperation: one named system-maintenance issues, and the others are lifestyle issues. “System-maintenance issues cover the metropolitan infrastructure to be recognized more clearly cost and benefits to the region, while lifestyle issues involve the social access and the interaction of individual with schools and neighborhoods” (Williams 1971 in NRC 1999).

housing and community development under system maintenance categories because network perspective focus on who or which organization takes charge of this service function. Planning or economic development department of most local governments take charge of system maintenance function including housing and community development. There are not much contacts or contract with education or welfare officials and organization and economic development or planning officials or agency. It is also not a relevant to contract network between welfare and highway peoples for economic development. Therefore I categorized system maintenance intergovernmental revenues to consist of local interlocal revenue for highways, transit subsidies, housing and comprehensive development and sewerage.

The Character of city political institution: Since the reform era, institutions have been critically debated about the best way to form of municipal governments. In their study of the city manager form, Feiock, Jeong and Kim (2003, 617p) point out that: “The form of government embedded in the city charter operates as a constitutional contract.” It is helpful to consider how each institution may aid municipal governments in reducing the transaction costs usually associated with collaborative economic development policy.

The character of city political institution is measured by the form of municipal government operationalized by whether a community has a mayor-council form of government or not. City managers instituted norms of professional careers and conducts that are indirectly tied to the outcomes of election, and so they are able to make credible commitments to block such a behavior in a pluralistic situation (Feiock, Jeong, and Kim 2003, Feiock and Kim 2000). Mayors as politician depended on the electoral supports from various interests. Thus they are not able to commit to resisting such rent-seeking behavior. Thus city manager form of government is able to reduce the transaction costs of rent-seeking that might be in collaborative interlocal networks through balancing and filtering many interests. While risk averse mayor system increases the division transaction cost, they easily accept the negation results in spite of burdening some loss from cooperation. If local government officials are more risk averse, they will want to consummate joint projects rather than risk losing the opportunity presented by a joint venture. Mayor-council form of government has been linked to greater risk aversion in policy choices (Clingermayer and Feiock 2001).

Characteristics of Community: Characteristics of Community include variables related with economic cost and demand of economic development in the community.

The economic environment and conditions of the community also need to be taken into account. The survey provides measures of the extent to which a city experiences development competition from nearby cities and the extent to which development issues are controversial in the community on four point scales. It also includes a measure of the size of businesses that are primarily targeted for recruitment.¹⁰ The model will also include median household income in 2000, the rate of growth over the last three years across seven sectors and fiscal health as measured by the percent of revenues from own sources reported in the *Census of Government Finances*.

City size is also important because small governments may realize greater scale economies through cooperation and is measured by city population transferred natural log and total revenue. We expect both have a negative effect on cooperation. Because *population homogeneity* reduced agency costs for officials negotiating interlocal agreements on behalf of citizens, we expect racial homogeneity will increase the likelihood of joint development ventures.

Geography variable is measured by number of cities on the border of city or located within 10 miles because of existing unincorporated area between cities. The number of special neighbor city has positive effect on joint venture.

Analysis Method

Probit Maximum Likelihood Techniques

Existence regional partnership for economic development is dependent variable in this first analysis. The model is estimated using probit maximum likelihood techniques.

Dependent variable, EXISTENCE OF REGIONAL PARTNERSHIP is dichotomous dependent variables. The technique of maximum likelihood involves specific the joint probability distribution function for the sample data. This model assumes that I have a random sample of size n drawn from some probability distribution.

Second stage dependent variable is also a dummy variable and it is not a liner relationship with independent variable. We also estimate the influence of community, political, and network

¹⁰ Those under 20 employees, 2.b/w 20-49, 3.b/w50-99, 4.b/w 100-200, 5 more than 200.

characteristics on a city's cooperation for economic development using a probit maximum-likelihood estimator.

When the model is specified, then maximum likelihood estimators may lose some of their desirable properties. However, it has been shown that under very weak conditions, maximum likelihood estimators will still have a well-defined probability limit and will be approximately normally distributed. Moreover, it is still possible to compute the variance of maximum likelihood estimators based on a random sample even if the model is badly misspecified. The ROBUST to the maximum likelihood procedures computes standard errors for maximum likelihood estimates that are insensitive (or "robust") to model misspecification¹¹. White suggests comparing the usual and robust estimates of the covariance matrix of maximum likelihood estimators as a test of model specification. Hence I apply the Huber/White/Sandwich estimates of variance to acquire robust standard errors. The name "sandwich" refers to the mathematical form of the estimate, namely that it is calculated as the product of three matrices: the matrix formed by taking the outer product of the observation-level likelihood/pseudolikelihood score vectors is used as the middle of these matrices (the meat of the sandwich), and this matrix is in turn pre- and post-multiplied by the usual model-based variance matrix (the bread of the sandwich (from Stat web page. www.stata.com/support)

Clarify Analysis

Gray King et. al.(2000) argue that standard statistical interpretation is somewhat ambiguous and not substantive. For that reason, they recommend statistical simulation as an easy method of computing quantities of interest and their uncertainty (King, et. al.,2000, Tomz, et. al.,2003). It uses the simple to estimate a feature of the population, such as its mean. Simulation allows us to get the "probability distribution," rather than population and draw to approximate some feature of the distribution. I can uses *Clarify* program, which is provided Gary King, Micheal Tomz and Jason Wittenberg. Clarify is a program that uses Monte Carlo simulation to convert the raw output of statistical producers results that are direct interest to researchers (King, et. al., 2000)

In the first stage regional partnership model, for expository purpose I only focus on a local governmental cooperative norm and number of local governments in Metropolitan area. We also

¹¹ For details, see Halbert White, 1982 "Misspecification and Maximum Likelihood Estimation", *Econometrica* (January)

include a quadratic term to test the hypothesis that formation of economic regional partnership rise with number of local government in Metropolitan Area is small but so small are also hard to make a cooperation to form economic regional partnership because of benefit from cooperation.

In second stage model, for expository purpose I only focus on a weak tie resource network and participation in joint venture with other local governments. I also include a quadratic term to test the N stage 3 person game model hypothesis that joint the joint venture to encourage economic development with other local governments rise with the larger number of neighbor local government.

CHAPTER 5

RESULTS

This chapter provides the results and findings of the two set of analyses described in the previous chapter. First, it presents finding from descriptive data analysis related to the formation of regional partnerships for economic development and the results of the empirical analysis which tests four dimension of social capital to explain why some metropolitan areas emerge the regional partnership. Second, the chapter provides the descriptive findings related to the joint venture with other local government to encourage economic development and three characteristics (community, political institutions, and network structure) of local government to reduce the transaction cost. This chapter also presents the results of an empirical analysis which test the three characteristics of local governments as institutional actor to reduce the transaction cost of interlocal cooperation.

Formation of Regional Partnership for Economic Development and Social Capital

Descriptive Findings

Table 2 reports emergence of regional partnerships for economic development by region. These tables show the comparison of formation of regional partnership to region.

In addition, I found that metropolitan areas in the Midwest have a lower rate of formation of regional partnerships after 1990 as compared with other regions. Table 2 also shows us 47% of metropolitan areas in northeast region formed regional partnerships compared to other regions regional partnerships have emerged since 1990. An interested finding is that metropolitan areas in south region rapidly have increased the number of regional partnerships for economic development since 1990 compare to past decade. 50 metropolitan areas (43.1%) in South region have formed the regional economic development partnership.

Table 2. Emerging Regional Partnership after 1990 and Regional Distribution

<i>Region</i>	<i>Emergence of Regional Partnership Since 1990</i>		
	None	Partnership Formed	Total MSA
North East	18	16	34
% within REGION	53%	47%	100%
% of Total MSA	6.7%	5.9%	12.6%
Midwest	50	22	72
% within REGION	65%	35%	100%
% within Total MSA	18.6%	8.2%	26.8%
South	66	50	116
% within REGION	56.9%	43.1%	100%
% within Total MSA	24.5%	18.6%	43.1%
West	28	19	47
% within REGION	59.6%	40.4%	100%
% of Total	10.4%	7.1%	17.5%
Total	162	107	269
% within Total MSA	60.2%	39.8%	100%

Table 3 reports summary statistics for each independent variable. It provides a comparison of these statistics for metropolitan areas in which regional partnerships for economic development emerge and those where they do not. It reports the mean, maximum, minimum and standardized error by whether formation of regional partnership or not.

First, table 3 reports on average 45.2 % of local governments within metropolitan area have intergovernmental revenue. Almost 58% of local governments in each metropolitan area with regional partnerships have intergovernmental revenue from other local governments compare with metropolitan areas which don't have a regional partnership (37%). The difference is about 20%. For example, metropolitan areas like 'Great Fall, MT', 'Laredo, TX' and 'Pittsfield, MA' have no local governments to have intergovernmental revenues from other local government, while 17 metropolitan areas including Denver-Boulder-Greeley, CO. CMSA and Pheonix-Mesa MSA are 100% of city governments to have intergovernmental revenue from other local governments. Table 3 also reports that the average number of general governments within metropolitan areas is 41. Some big metropolitan areas especially CMSA areas have a more than 100 municipal governments. Metropolitan areas with regional partnership for economic development consist with average 33 municipal and county governments and it is smaller than metropolitan areas without regional partnership (average 52 general purpose local governments).

Table 3 Summary of Statistics of Formation of Regional Partnership

	N	Mean	Max	Min	SD
New Regional Partnership	269	.3629	1	0	.7527
SOCIAL CAPITAL					
INSTITUTIONAL	RP=0: 162	.3717	1.0	0	.2868
COOPERATIVE NORM	RP=1: 107	.5770	1.0	0	.8790
(% of local govt. with interlocal revenue from other local govt.)	Total: 269	.4519	1.0	0	.6026
SOCIAL TRUST	RP=0: 162	5073.64	10631	1242	1716.98
(Crime rate per 10K POP)	RP=1: 107	4892.34	11610	1892.3	1711.02
	Total: 269	4942.36	11631	1242	1747.42
MOBILITY	RP=0: 162	65.66	79.61	50.94	6.057
(Homeownership rate)	RP=1: 107	64.03	75.37	33.29	6.777
	Total: 269	64.99	79.61	33.29	6.383
CIVIC ORGANIZATION	RP=0: 162	.3647	.97	.16	.1389
(Number of Civic, Social, Membership Org. and association per 1000)	RP=1: 107	.4130	1.24	.11	.1770
	Total: 269	.3943	1.24	.11	.1646
CONSTRAINED STATE LAW/RULE	RP=0: 162	2.401	5	0	1.017
	RP=1: 107	2.395	5	0	.9699
	Total: 269	2.194	5	0	.9955
CHARACTERISTICS of METROPOLITAN AREA					
NUMBER OF CITIES within METROPOLITAN AREA	RP=0: 162	52.598	175	2	64.05
	RP=1: 107	33.178	363	3	34.05
	Total: 269	40.807	363	2	49.28
DENSITY	RP=0: 162	107	1223.7	4.5	228.13
(Population per square miles)	RP=1: 107	194.20	1393.3	11.47	152.51
	Total: 269	191.72	1393.3	4.5	191.72
METROPOLITAN ECONOMIC PROSPERITY INDEX	RP=0: 162	-1.395	8.77	-18.59	4.386
	RP=1: 107	-1.029	10.92	-10.34	4.043
	Total: 269	-1.121	10.92	-18.59	4.285
HETEROGEITY (Difference between Central cities and Suburban Area)					
DISSIMILARITY OF SOCIOECONOMIC STATUES	RP=0: 162	.7563	4.86	0	.6153
	RP=1: 107	1.011	3.13	.02	.7556
	Total: 269	.8565	4.86	0	.6842
STRUCTURE OF METROPOLITAN AREA					
PRINCIPAL CITIES	RP=0: 162	1.321	4	1	.6170
(Number of principal cities)	RP=1: 107	1.495	3	1	.7570
	Total: 269	1.388	4	1	.6794
MULTIPLE STATES	RP=0: 162	1.1296	3	1	.3883
(Number of states)	RP=1: 107	1.1682	4	1	.4655
	Total: 269	1.1444	4	1	.4196

Social trust variable is measured by the rate of serious crime per 10,000 residents. Metropolitan area with regional partnership has lower mean value (5073.64) of crime rate than without regional partnership (4892.34). This shows metropolitan with the higher social trust and safe environment, the higher possibility of formation of regional partnership. Mean value of civic, social, membership organization per 1000 in metropolitan area with regional partnership is .4130 and is a little bit higher than metropolitan without regional partnership.

Mean value of state restriction of interlocal cooperation by state rules and laws also shows the difference between with regional partnership and without metropolitan partnership. Constrained Metropolitan areas with regional partnership are a little bit lower average index value (2.395) than without regional partnership (2.401).

Dissimilarity index of socio-economic statuses between central city and suburban area of metropolitan area with regional partnership is 1.011 and is higher than metropolitan area without regional partnership. It means metropolitan area with higher dissimilarity between central city and suburban area would be likely to form regional partnership to solve the regional problems. Benton Harbor, MI MSA is the highest dissimilarity index of all metropolitan areas. But this MSA has no regional partnership. But Detroit-Ann Arbor- Flint, MS MSA is the second highest dissimilarity index metropolitan area and has a regional partnership for economic development.

Where metropolitan area formed regional partnership average 194.2 people lived in per square miles and these areas are denser than without regional partnership (107). Mean value of economic prosperity index of metro area with regional partnership is higher than without metropolitan area.

Modifications to the Model

I collected the percent of local government with intergovernmental expenditure. On average 16.8 percent of local governments within a metropolitan area report intergovernmental expenditures directed to other local government. Because of correlation between interlocal revenue and interlocal expenditure is strong and significant I don't input this variable in the stage 1 model. In addition, the design in Chapter 3 included the absolute value of difference white-non Hispanic rate between center cities and suburban areas as measurement of heterogeneity of metropolitan areas. This variable is highly correlated with the city suburban economic dissimilarity variable and is excluded to avoid a multicollinearity problem. The other excluded

variable is RACE variable measured by percent of white-non Hispanic population in metropolitan area. This variable also highly correlates with the metropolitan economic prosperity index and is not included in my model.

Probit Analysis Results

The model is estimated using probit maximum likelihood techniques. Parameter estimates are reported in Table 4. The results provide support for a link between cooperation among local governments, our macro/cognitive social capital measure, and the formation of regional partnerships. Regional cooperation was more likely in metro areas that had more frequent fiscal interaction among local governments. Where more cities entered into interlocal service agreements, there was a significantly higher likelihood an economic development partnership would form.

Table 4 also reports civic organization as individual network had as anticipated little effect on the likelihood of a regional economic partnership. It means institutional level social capital is a more critical factor in institutional collective action and interlocal cooperation rather than individual level social capital.

In addition, we also found number of participants (i.e. number of local governments) had a negative effect on the probability of a regional partnership. This result indicates group size is also an important consideration in cooperation among local governments. Olberding (2000) also found the number of local governments in metropolitan areas decreased the likelihood of collective action. As the number of local government in a metro increases so does decision costs (Stevens 1993).

Density has a positive effect on the probability of a regional partnership. This result suggests dense metropolitan areas where resident share same space and life styles, facilitate the cooperation among governments. Density increases the need of interlocal cooperation and benefit from interlocal cooperation because of economic of scale.

Table 4: Probit analysis of formation of economic regional partnership after 1990

Independent Variables	<i>Probit</i>	<i>HWS Probit</i>
INSTITUTIONAL/ COGNITIVE SOCIAL CAPITAL		
COOPERATIVE NORM	.714** (2.65)	.714** (2.71)
INDIVIDUAL/ COGNITIVE SOCIAL CAPITAL		
SOCIAL TRUST	-.00006 (-1.10)	-.0000606 (-1.11)
MOBILITY	-.0073 (-0.45)	-.0073 (-0.45)
INDIVIDUAL/STRUCTURAL SOCIAL CAPITAL		
CIVIC ORGANIZATION	1.631 (1.08)	1.631 (1.09)
INSTITUTIONAL/STRUCTURAL SOCIAL CAPITAL		
CONSTRAINED STATE LAW/RULES	-.1368 (-0.59)	-.1368 (-0.59)
CHARACTERISTICS OF METROPOLITAN AREA		
NUMBER OF CITIES within METROPOLITAN AREA	-.0184* (-1.99)	-.0184* (-2.01)
DENSITY	.0013** (2.98)	.0013** (2.99)
METRO PROSPERITY	.0422^ (1.65)	.0422^ (1.65)
HETEROGENITY		
ECONOMIC STATUES HETEROGENITY	-.04325 (-0.23)	-.04325 (-0.22)
STRUCTURE OF METROPOLITAN AREA		
CENTRAL CITY	.1697 (1.37)	.1697 (1.38)
MULTIPLE STATE	-.1220 (-0.53)	-.1220 (-0.54)
6. Constant	.7302 (0.71)	.7302 (0.73)
Number of observations	269	269
LR chi2(11)	42.06	43.56
Prob > chi2	0.000	0.000
Pseudo R2	0.1432	0.1432
McKelvey& Zavoina's R2	.3892	.3892
% predicted	68%	68%

^p <.1, * p< .5, **p<.01.

Clarify Analysis Results

To better interpret the effect of interlocal agreements and group size we employ the simulations using Clarify (King, et. al.,2000; Tomz, et. al.,2003).¹² ‘Clarify’ is a program that uses Monte Carlo simulation to convert the raw output of statistical procedures results that are of direct interest to researchers. First, Clarify provides predicted values of dependent variable in this case probability of adoption when we set the all explanatory variables are equal to their mean. It can be said that the expected probability of formation of regional partnership for economic development adoption is .4079, when set the value of all variables on their mean.

Table 5. Predicted Probability of Adoption of Regional Partnership for Economic development

	<i>Mean Predicted Probability of Formation of Regional Partnership</i>	<i>Std. Err.</i>	<i>95% Conf. Interval</i>	
<i>Pr (RP not adopt =0)</i>	.592083	.0306017	.5325677	.6523639
<i>Pr (RP adopt =1)</i>	.407916	.0306017	.3476361	.4674323

For expository purposes, this dissertation focuses on two key variables, number of general purpose of local governments represents the *SIZE OF GROUP* and % of local governments with intergovernmental revenue represents *INSTITUTIONAL COOEPRATIVE NORM* in metropolitan area. Hypothesized effect of institutional cooperative norm is that metropolitan areas where the more portion of local governments with intergovernmental revenue will be more likely to form regional partnership for economic development. *Size of Group* represents how many local governments located within metropolitan area. The larger value of *SIZE OF GROUP* variable represents there are the more actors in formation of regional partnership. The hypothesized effect is that metropolitan area with the more local governments will be less likely to emerge regional partnership for economic development because of coordination cost. Holding all variables at their means, except *INSTITUTIONAL COOEPRATIVE NORM* and *SIZE OF GROUP* each, I can

¹² Clarify is a program that uses Monte Carlo simulation to convert the raw output of statistical producers results that are direct interest to researchers (King, et. al., 2000)

estimate each probability and uncertainty surrounding, for different levels of *INSTITUTIONAL COOEPRATIVE NORM* and *SIZE OF GROUP* . The results appear in Table 6.

Table 6. Predicted Probability of Formation of Formation of Regional Partnership by percentage

GROUP SIZE	Mean Predicted Probability of Formation of RP	COOPERATIVE NORM	Mean Predicted Probability of Formation of RP
25th percentile	0.4210	25th percentile	0.2412
50th percentile	0.3724	50th percentile	0.2745
75th percentile	0.3109	75th percentile	0.3567
99th percentile	0.0137	99th percentile	0.9773

Based on this simulation, I draw the graph of the probability of adoption of economic regional partnership by the percent of local governments with interlocal agreements in a metro and by the number of local governments in metropolitan area.

Figure 3 depicts the probability of adoption of economic regional partnership by the percent of local governments with interlocal revenue in a metro. The that probability of adoption of an regional partnership rise steadily until about 80 percent of the units engage in interlocal agreements, at which point the likelihood increases dramatically.

Figure 4 demonstrates that the number of governments in metro areas has the opposite effect. Partnerships decrease slowly with more governments and the probability of the adoption of a regional partnership remains above .30 until the number of general purpose local governments reaches almost the 90th percentile. At that point the likelihood of partnership drops to near zero

Probability of Adoption of Regional Partnership

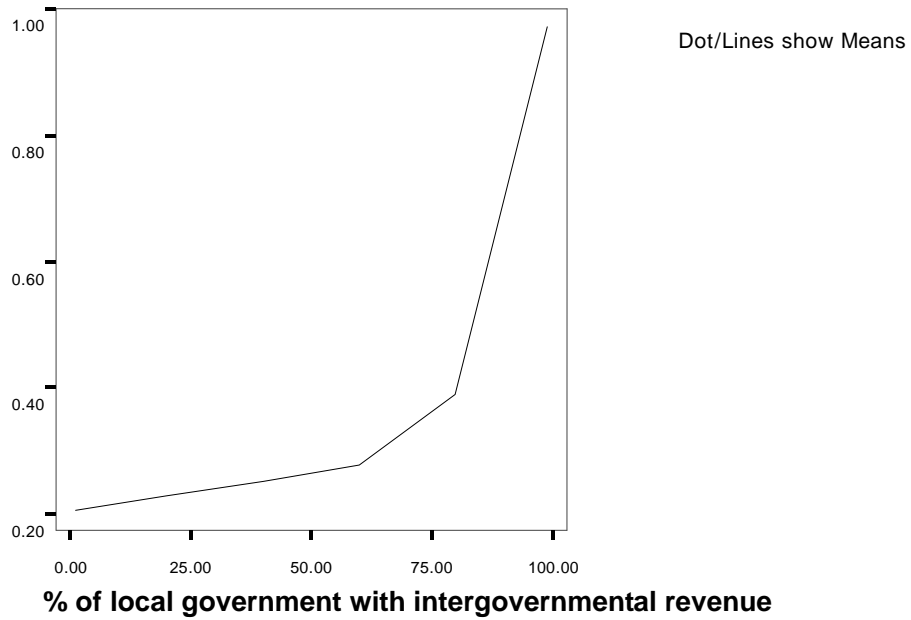


Figure 3. Probability of Adoption of Regional Partnership by Cooperative Norm

Probability of formation of regional partnership

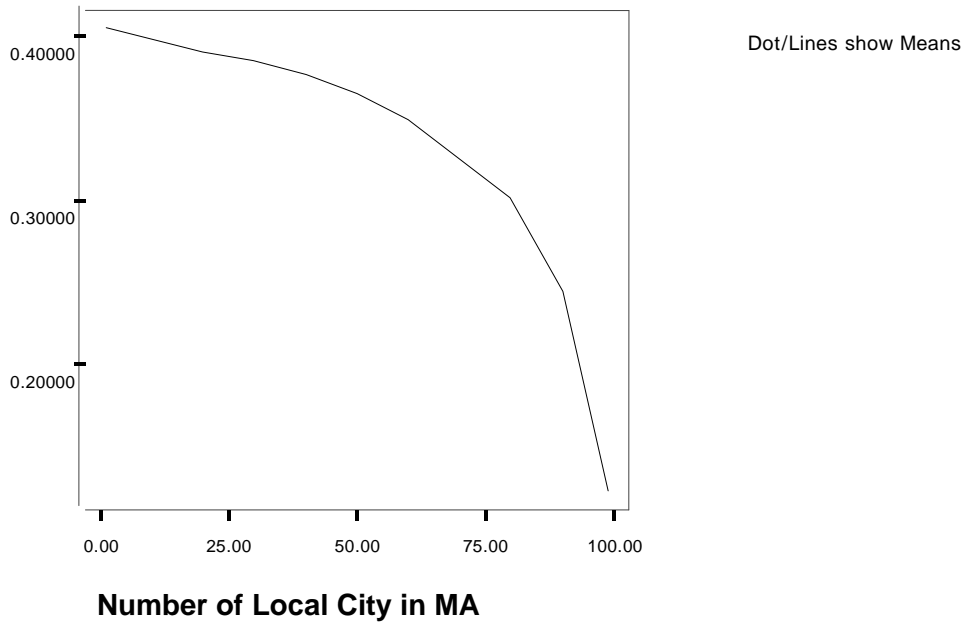


Figure 4. Probability of Adoption of Regional Partnership by Number of City

Interlocal Joint Venture for Economic Development

Descriptive Analysis

Table 7 reports summary statistics for each independent variable. It provides a comparison of these statistics for cities participating in joint ventures and those not participating. First, the mean value of strong tie resource network is 3.38. Local governments with interlocal joint venture for economic development contact average monthly with other local government for economic development issue and other local government contact a little bit more quarterly.

Over 90 percent of local government with interlocal joint venture involved in regional organization for economic development. This is consistent with the idea that regional governance as agenda setter or institution reduces the transaction cost; reducing information cost and enforcement cost from membership and small number of negotiation by regional governance also reduce the bargaining cost, it increase the possibility of interlocal cooperation for economic development.

In addition I found local governments with interlocal joint venture have a .23 % of system maintenance intergovernmental revenue. This is a small portion of total revenue but local government with interlocal joint venture have a higher portion of intergovernmental revenue than local government without interlocal joint venture (.17%). When comparing size of cities, Table 7 show us all mean value of population (127584), land area (41.76 square miles), and total revenue(\$219228000) of local government with joint venture is smaller than those cities without joint venture. Smaller cities may be more easily cooperate with other local government for creating joint venture with other local government to encourage economic development. Table 7 also reports cities with over 50000 populations have average 6.45 neighbor municipal governments. City with joint venture has average 7 neighbor municipal governments. When comparing others, these cities have one more neighbor municipal governments than city without interlocal joint venture for economic development.

Table 7 reports mean value of median income of city over 50000 populations is \$45511. And average median income (\$42266) of local governments with joint venture has lower than (\$47015) local governments without joint venture. It means prosperous city governments where richer resident live have a less interest economic development through joint venture with other local governments.

Table 7: Summary Statistics of Interlocal Joint Venture

		<i>N</i>	<i>Mean</i>	<i>Max</i>	<i>Min</i>	<i>SD</i>
Joint Venture		221	.3167	1	0	.4662
Characteristics of Networks						
Strong Tie Resources Network	JV=0: 151		3.172	5	1	1.379
	JV=1: 70		3.828	5	1	1.062
	Total: 221		3.380	5	1	1.321
Weak Tie Resource Network	JV=0: 151		.721	1	0	.449
	JV=1: 70		.914	1	0	.281
	Total: 221		.782	1	0	.413
Contract Network % of inter-local SM revenues	JV=0: 151		.0017	.04	.00	.0051
	JV=1: 70		.0023	.04	.00	.0070
	Total: 221		.0019	.04	.00	.0058
Characteristics of Political Institutions						
Form of Government (Mayor Council)	JV=0: 151		.251	1	0	.435
	JV=1: 70		.428	1	0	.498
	Total: 221		.462	1	0	.462
Characteristics of City						
SIZE OF CITY	Population	JV=0: 151	130310	656562	50024	113402
		JV=1: 70	127584	1223400	50083	159081
		Total: 221	129447	1223400	50024	129255
	Land Area	JV=0: 151	53.94	607.0	3.1	66.90
		JV=1: 70	41.76	324.3	2.2	46.18
		Total: 221	50.08	607.0	2.2	61.26
	Total Revenue (Unit:\$1000)	JV=0: 151	238318	5637379	2693	508270
		JV=1: 70	219228	2606767	2385	393866
		Total: 221	232272	5637379	2385	474208
GEOGRA- PHICAL	Number of Neighbor Cities	JV=0: 151	6.11	10	0	2.525
		JV=1: 70	7.20	12	1	2.157
		Total: 221	6.45	12	0	2.463
DEMOGRA- PHICAL	Race Homogeneity	JV=0: 151	71.004	97.61	25.9	18.931
		JV=1: 70	74.685	96.89	30.7	15.277
		Total: 221	72.170	97.61	25.9	17.903
	Median Income	JV=0: 151	47015	90859	25439	14384
		JV=1: 70	42266	75122	23484	11117
		Total: 221	45511	90859	23483	13592
ECONOMIC CONDITION OF CITY	Fiscal Health	JV=0: 151	.844	1	.42	.1098
		JV=1: 70	.812	1	.26	.1562
		Total: 221	.833	1	.26	.1268
	Economic Growth Rate	JV=0: 151	19.07	35	9	4.672
		JV=1: 70	18.94	29	8	4.857
		Total: 221	19.03	35	8	4.720
	Economic Development Controversy	JV=0: 151	3.47	4	1	.755
		JV=1: 70	3.65	4	2	.611
		Total: 221	3.52	4	1	.716
	Target Business Size	JV=0: 151	3.874	5	1	1.662
		JV=1: 70	3.871	5	1	1.658
		Total: 221	3.873	5	1	1.657
Development Competition	JV=0: 151	2.735	5	0	1.247	
	JV=1: 70	2.742	5	1	1.212	
	Total: 221	2.737	5	0	1.233	

Table 8 shows us 69.2 % of local governments over 50,000 population operate under council manager form of government. Forty-four percent (30) of cities with mayor council form local governments participate in joint venture with other local governments. Twenty-six percent of local governments with council manager form (40) have an interlocal joint venture. Total number of mayor-council form of local governments with interlocal joint venture is less than council-manager form of governments with interlocal joint venture. But comparing both, council government, local governments with mayor-council form of government, it is likely to be easier cooperate and participate in joint venture with other local governments under mayor council government.

Table 8. Form of governments and Joint Venture

		Form of Government		Total
		<i>Council Manager</i>	<i>Mayor-Council</i>	
Interlocal Joint Venture	<i>No</i>	113	38	151
	<i>Yes</i>	40	30	70
Total		153 (69.2%)	68 (30.8%)	221 (100%)

Probit Maximum likelihood analysis

We estimate the influence of community, political, and network characteristics on a city’s cooperation for economic development using a probit maximum-likelihood estimator. In addition, we apply the Huber/White/Sandwich estimate of variance to acquire robust variance that gives accurate assessments of the sample-to-sample variability of the parameter estimates even when the model is misspecified. Our institutional collective action model guides this analysis. The results reported in Table 9 confirm that network structure plays a significant role in interlocal cooperation through joint economic development ventures. The strong tie resource network indicated by frequency of interactions with other local governments has a strong positive relationship with the formation of joint ventures. Participation in regional partnership organizations, which constitutes a weak tie resource network, also has a significant positive effect on joint economic development ventures. The existence of past fiscal transfers with other governments in the county, the contract network, did not lead to interlocal cooperation on economic development.

**Table 9 : Probit Estimates of City Participation in Joint Economic Development
Ventures with other Governments**

	Probit	HWS Probit
Strong Tie Resources Network	.271** (3.09)	.271** (3.08)
Weak Tie Resource Network	.775** (2.66)	.775** (2.87)
Contract Network	23.464 (1.38)	23.464 (1.40)
Form of Government (Mayor Council)	.162 (0.74)	.162 (0.74)
Ln Population	-.012 (-0.04)	-.012 (-0.05)
Ln Total Revenue	.004 (0.03)	.004 (0.03)
Land Area	-.003 (-1.16)	-.003 (-1.57)
Number of Neighbor Cities	.135** (2.95)	.135** (2.99)
Race Homogeneity : (% non-Hispanic White)	.014** (2.40)	.014** (2.64)
Ln Median Income	-1.152** (-2.80)	-1.152** (-2.97)
Fiscal Health	-.384 (-0.47)	-.384 (-0.50)
Economic Growth Rate	-.007 (-0.32)	-.007 (-0.32)
Economic Development Controversy	.182 (1.83)	.182 (1.24)
Target Business Size	.032 (0.51)	.032 (0.52)
Development Competition	-.064 (-0.77)	-.064 (-0.78)
Constant	8.322 (1.65)	8.322 (1.74)
Number of observations	221	221
LR chi2(13) , Ward chi(13)	53.45	56.76
Prob > chi2	0.0000	0.0000
Pseudo R2	0.1937	0.1937
McKelvey& Zavoina's R2	0.391	0.391
% predicted	73.8 %	73.8 %

** $p < .01$, * $p < .05$, ^ $p < .1$

The influence of form government did not achieve statistical significance. Nevertheless, three city attributes were found to be related to joint ventures. Both low income and racially homogeneous communities were more likely to cooperate with their neighbors on development projects. Finally, the level of controversy over economic development issues was linked to joint ventures. Cooperation was more likely where economic development was controversial.

Clarify Analysis Results

For more substantively informative interpretation, this paper provides simulation-based approach. Gary King, Michael Tomz and Jason Wittenberg(2000) recommend statistical simulation as an easy method of computing quantities of interest and their uncertainties. It uses the sample to estimate a feature of the population, such as its mean or its variance. Simulation allows us to get the “probability distribution,” rather than populations and draw to approximate some feature of the distribution. First, Clarify provides predicted values of dependent variable in this case probability of adoption when we set the all explanatory variables are equal to their mean. It can be said that the expected probability of joint venture with other local government for economic development adoption is .29425, when set the value of all variables on their mean.

Table 10. Predicted Probability of Adoption of Interlocal Joint Venture for Economic development

	<i>Mean Predicted Probability of Interlocal Joint Venture (ILJV) Adoption</i>	<i>Std. Err.</i>	<i>95% Conf. Interval</i>	
<i>Pr (ILJV not adopt =0)</i>	.70574	.0329936	.63569	.78203
<i>Pr (ILJV adopt =1)</i>	.29425	.0329936	.22317	.36435

For expository purposes, this dissertation focuses on two key variables, frequency of contact with other city governments officials represents the *STRONG-TIE RESOURCE NETWORK* and *NEIBOR LOCAL GOVERNMENT* represents the probability of alternative partners. Hypothesized effect of *STRONG-TIE RESOURCE NETWORK* is that local governments with more frequently contact with other local governments officials for economic

development will be more likely to participate in joint venture with other local government to encourage economic development. *NEIGHBOR LOCAL GOVERNMENT* represents how many local governments located within 10 miles or bordered with. The larger value of *NEIBOR LOCAL GOVERNMENT* variable represents the local government has more potential partners for joint ventures. The hypothesized effect is that local government with the more neighbor local governments will be more likely to participate in joint venture with other local governments to encourage economic development. Holding all variables at their means, except *STRONG-TIE RESOURCE NETWORK* and *NEIBOR LOCAL GOVERNMENT* each, I can estimate each probability and uncertainty surrounding, for different levels of *STRONG-TIE RESOURCE NETWORK* and *NEIBOR LOCAL GOVERNMENT*. The results appear in Table 11.

Table 11. Predicted Probability of Participation of ILJV of Local governments by percentage

<i>STRONG TIE RESOURCE NETWORK</i>	<i>Mean Predicted Probability of Participation to ILJV</i>	<i>NEIBOR CITY</i>	<i>Mean Predicted Probability of Participation to ILJV</i>
25 th percentile	0.19649	25 th percentile	0.10345
50 th percentile	0.25052	50 th percentile	0.12995
75 th percentile	0.30002	75 th percentile	0.15740
99 th percentile	0.53197	99 th percentile	0.25982

The probability of participation to interlocal joint venture rises slowly with increase of frequency of contact with other local governments until 75th percentile, then the high value of interaction among/between local government officials influence strongly on adoption as .30 probability of ILJV adoption. In other words, the impact of frequency of contact with other local officials seems relatively low, when the local governments contact just regularly yearly, quarterly or monthly with other local government officials about economic development issues, because the predicted probability is steady as .1964 to .3000 between 25th and 75th. However, the impact of interaction with other local governments variable jumps up from 0.3000 probability of 75th to 0.5319 of 99th, when it has the highest level of impact. This suggests that at least weekly or more frequently contact with other local governments' officials is real strong resource network impact to reduce the transaction cost and create together joint venture for economic development. Figure

5 depicts the probability of adoption of interlocal joint venture for economic development by the frequency of contact with other local government for economic development. The that probability of participation of joint venture with other local governments rise steadily from 13th to 80th, but after 80th, in other word, local government officials weekly more frequently contact with other local government official at which point the likelihood increases dramatically. It means weekly contact to be real network factor to increase the trust by frequent reciprocity and reduce the transaction cost to interlocal cooperation.

The impact of number of neighboring city is rising steadily until 75th as shows in table 11. Figure 6 demonstrates that the number of neighbor local governments has the similar effect. Participation of joint venture increases dramatically with 2 more neighbor local governments at 10th point. The probability of the adoption of a joint venture rises steadily up to 80th. It means the probability of the adoption of a joint venture above 10 more neighbor local government soars again. These findings strongly support 3 person repeated stage game theory hypothesis.

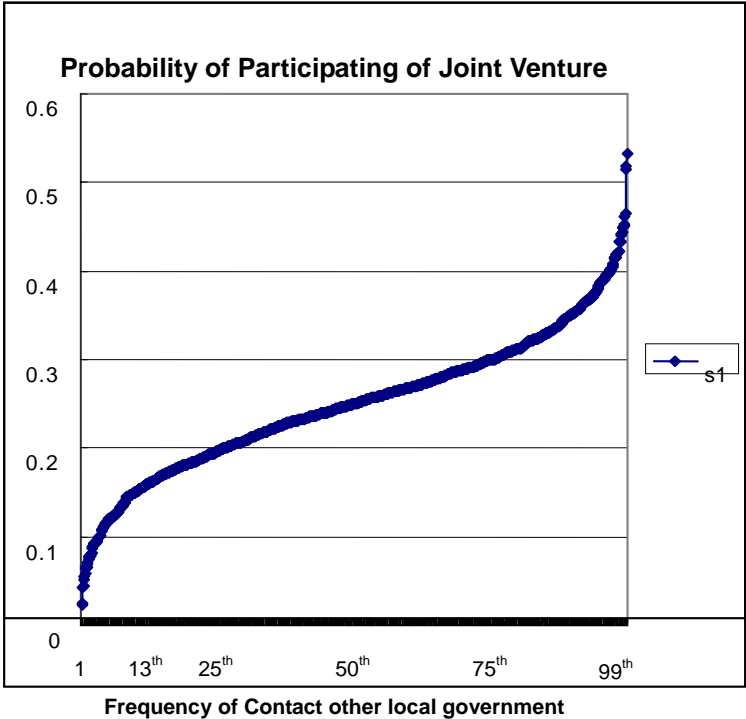


Figure 5. Probability of Adoption of interlocal joint venture by frequency of contact with other local government officials.

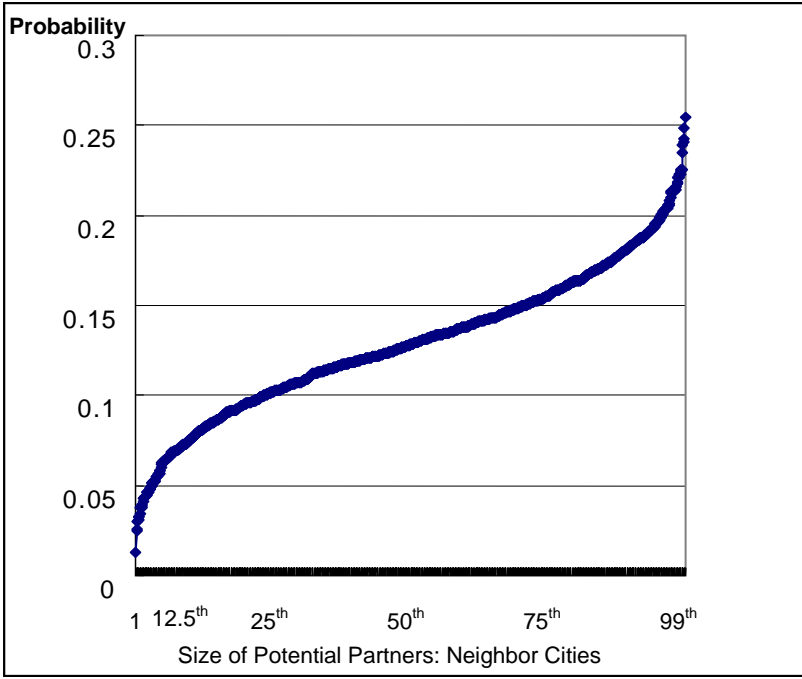


Figure 6. Probability of Adoption of Joint venture by Potential Partners Size

CHAPTER 6

CONCLUSION

There has been renewed attention to the possibilities and realities of interlocal cooperation among local governments. Nevertheless, economic development is assumed to be different than other local functions in this respect. Peterson(1981) argues that economic development constitutes a unitary interest for local governments and is thus characterized by intergovernmental competition. This view has gone generally unchallenged. In this dissertation I have asserted and presented empirical evidence to challenge this position. Economic development has a necessarily externality and it is also cost. Collaborative approach is the best way of internalize of externality of economic development. Local governments choose the collaborative approach based on the scope of externality and target. In this dissertation, I examine two collaborative approach to economic development; regional partnership as regional approach and interlocal joint venture as interlocal approach.

Institutional collective action provides a useful framework for examining regional and interlocal cooperation in fragmented metropolitan areas by focusing attention not only the economic scale and costs and benefits of interlocal and regional cooperation, but also their transaction costs. The empirical results reported here suggest that cooperation can be viable when local institutions reduce the transaction costs of joint action. Cooperative action in the game theoretic model depends not only on the on mechanisms to reduce the transaction in forming partnerships. Transaction costs can be reduced by social capital that is a product of local political institutions and network relationships. Whatever scope of cooperation is large or small, cooperation emerge easily with low transaction cost by reputation, information, and trust. Both results of regional and interlocal collaborative approach models reported social capital and networks structure has positive effect on cooperation among local governments. This provides a repudiation of the conclusion that local governments can not cooperate on economic development issues.

The scope of cooperation is different between regional approach and interlocal approach.

Our results provide a strong repudiation of the recent work that concludes governmental fragmentation is destructive of regional cooperation but it is also raise the interlocal joint cooperation for economic development. Large number of governments increase the coordination cost in regional approach to negotiate and coordinate each stakeholders' interest. But which fragmentation means there are the more potential partners is decreasing opportunism and probability of cooperation in small size of interlocal cooperation.

In the first regional or macro level analysis the institutional collective action model focuses on metropolitan areas as the action arena where arise institutional collective action, the results from the formation of regional partnership for economic development model presented here highlight the importance of the institutional level endogenous role for social capital in theories of institutional cooperation by accounting for social capital resulting from institutional interactions. The influence of cognitive forms of social capital is reinforced by the finding that interlocal agreements had a greater impact on collective action to form economic development partnerships than did individual level social capital like civic associations.

At the second more micro level, the institutional collective action model focus on local governments as actors. The empirical results generally confirm that interlocal cooperation can be a viable alternative for local governments and that policy networks play an important role in the realization of cooperation. We find that both strong and weak tie resource exchange networks enhance the likelihood of economic development cooperation.

We also find that that certain city attributes can be linked to interlocal cooperation for economic development. In particular, median income, development controversy and form of government affect the likelihood cooperation though joint ventures with other local governments. Much network research has focused on relationships between actors to the neglect of actor attributes. For example network research derived from the sociological tradition focuses on the structure of ties in which actors are embedded and rather than attributes of actors that shape their interest in cooperation. Both the attributes of actors and relations among them need to be accounted for in explanations of how and why they decide to cooperate with others. The empirical results demonstrate both characteristics of a city and its network influence the likelihood of joint ventures. Interlocal cooperation among local governments provides a realistic alternative mechanism to address policy externalities. These voluntary agreements emerge from a dynamic political contracting process among local government units.

These findings may have implications for a variety of regional issues affecting citizens and governments in metropolitan areas. Recent research has directed attention to institutional reform of local government institutions and to efforts to create new jurisdictions or modify the boundaries of existing local governments through annexation (Carr and Johnson 2002). Each of these literatures has applied collective action models to institutional choice with some success. The results presented here suggest that these models might be augmented to account for internal resources for overcoming social dilemmas as well as the contextual elements of the collective action framework.

The institutional collective action framework also has potential help us to better understand the dynamics of decentralized systems of governance and to identify the various ways governments cooperate and compete. Institutional collective action in metropolitan areas has proven both difficult to understand and to achieve because it confronts strategic interactions among numerous organizations and jurisdictions, multiple potential solutions, and a high degree of uncertainty. Strategic interaction underlies regional governance problems such as economic development because each jurisdiction chooses their own policies, but their outcomes are directly affected by the decisions of other local actors (Brueckner 2001). A related problem is that of coordinating behavior around one of several competing, plausible alternatives. Coordination problems arise when there are multiple equilibria; situations where there are several jointly preferred possible outcomes around which actors can coordinate their behavior (Heckathorn and Maser 1987). Because decisionmakers are boundedly rational when it comes to evaluating gains from cooperation, a high degree of uncertainty regarding outcomes of cooperation is also inevitable. Such uncertainty can easily impede efforts at regional cooperation. In this type of situation the circulation of information on the benefits of joint action may not be enough to overcome barriers to cooperation unless it is accompanied by cognitive/structural social capital resulting from inter-organizational learning and experience interacting with other local actors. The analysis reported here suggests that a decentralized system of governance can provide these types of interactions that facilitate future cooperation. Even in the traditionally competitive economic development arena local governments engage in cooperative action and that cooperation is positively influenced by routine interactions among local leaders.

The study of regional governance and economic development can benefit from drawing

upon the conceptual and theoretical tools developed by social scientists in other disciplines who share an interest in institutions and cooperation. For example theories of collaboration developed in the study of common pool resources situations may have direct implications for service delivery in metropolitan areas. The work of Elinor Ostrom and others on cooperative institutions provides a parallel to local actors in a metro area seeking to solve regional problems of economic development. The more serious the underlying development problem, the larger the aggregate gains from resolving it, and the greater the likelihood of a cooperative arrangement to do so. This condition has most often been investigated in the resolution of common pool resource problems. As losses from over consumption increase, it is more likely that all parties involved will seek some agreement to restrict use (Lipecap 1989; Lubell, et. al. 2002; Ostrom 1990; Ostrom, Gardner, and Walker 1994). Unlike the common pool resource situations, the welfare losses resulting from missed development opportunities may not be dramatic, and inaction may not have catastrophic consequences. Given uncertainty and multiple equilibria, each local government independently pursuing development (i.e. no cooperation or coordination) remains a likely result, even if every jurisdiction is made worse off.

The role of entrepreneurs in economic development policy has received only modest attention. Selective incentives motivate political entrepreneurs (Schneider, Teske, and Mintrom 1995), but complicate cooperation. Local government officials' political careers are linked to the characteristics of political constituencies, and their strategies are constrained by local political opportunities and institutions. Understanding the micro level incentives of both administrators and elected officials is necessary to predict strategic choices in economic development policy. Characteristics of constituencies and diversity of preferences within government units needs to be systematically examined. Clingermayer and Feiock (2001) found that council members with racially and economically diverse districts focused attention outside their district and built city-wide electoral coalitions.

Extension of this logic to the regional level might suggest that constituency diversity leads city officials to seek alliances with other jurisdictions that could provide sources of political capital. The institutional structure of local governments and powers of office also come into play as they influence the ability of bargainers to credibly commit their city government to collective action.

Future Research on Cooperative Economic Development

A contractual arrangement between two local government units constitutes a dyadic relationship. If each unit also participates in other agreements with other local governments, they are also involved in dyadic relationships with those other governments. Having a favored position in the network structure means that an actor may be able to extract better bargains in a cooperation and coordination game. Network structure is one kind of social capital. Concept of social capital is good but it is somewhat ambiguous and hard to find exact measurement. Network analysis research provides precise definitions and concrete measures of efficient information requirement, bargaining power, credibility of cooperation that attaches to position in network structures of interlocal relations. But our analysis of network has some limitations.

One advantage of the analysis described above is that it will make use of data from a national study. This will enhance the generalizability of the findings and allow me to systematically examine how state level institutional structures. Nevertheless, the use of this survey imposes several limitations. First, we do not know the nature and purpose of the joint ventures. Second, the tests of the network hypotheses are based on very simple network proxies, the in-degree centrality of a community and membership in regional organizations.

Future work that maps the structure of contact and contract networks among local governments in a few metropolitan areas will help us tease out the empirical implications of the formal model and enhance our understanding of the potential and limitations of policy cooperation in polycentric metropolitan areas. A micro level analysis of joint ventures or interlocal joint agreement for economic development among local governments in some metropolitan area region will allow us to more systematically investigate the role of network structure in explaining collaborative economic development strategy among local governments. Future research is identified how to shape each ego-network structures which dyadic relations between actors and triad relations among actors from two metropolitan area survey suggest more concrete measurement of five kinds of transaction cost. Each transaction cost is affected by each network structure and it influences the interlocal cooperation.

Above research plan, network structure considered dependent variable, but it is also possible to be a dependent variable. In chapter 3 and 4, characteristics of community and political institution affect the interlocal cooperation. Therefore future work also investigates how this attribute of actors influence the network structure.

APPENDIX A
FORMATION OF REGIONAL PARTNERSHIP AFTER 1990

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Abilene, TX MSA	1
Albany, GA MSA	1
Albany--Schenectady--Troy, NY MSA	0
Albuquerque, NM MSA	1
Alexandria, LA MSA	0
Allentown-Bethlehem-Easton, PA MSA	1
Altoona, PA MSA	0
Amarillo, TX MSA	0
Anchorage, AK MSA	0
Anniston, AL MSA	0
Appleton--Oshkosh--Neenah, WI MSA	0
Asheville, NC MSA	1
Athens, GA MSA	0
Atlanta, GA MSA	1
Augusta-Aiken, GA-SC MSA	0
Austin-San Marcos, TX MSA	1
Bakersfield, CA MSA	0
Bangor, ME MSA	1
Baton Rouge, LA MSA	0
Beaumont-Port Arthur, TX MSA	1
Bellingham, WA MSA	0
Benton Harbor, MI MSA	0
Billings, MT MSA	0
Biloxi-Gulfport-Pascagoula, MS MSA	1
Binghamton, NY MSA	1
Birmingham, AL MSA	1
Bismarck, ND MSA	0
Bloomington, IN MSA	0
Bloomington-Normal, IL MSA	0
Boise City, ID MSA	0
Boston—Worcester—Lawrence, MA—NH—ME—CT CMSA	0
Brownsville-Harlingen-San Benito, TX MSA	0

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Bryan-College Station, TX	1
Buffalo-Niagara Falls, NY	1
Burlington, VT MSA	0
Canton-Massillon, OH MSA	0
Casper, WY MSA	0
Cedar Rapids, IA MSA	0
Champaign-Urbana, IL MSA	0
Charleston-North Charleston, SC MSA	1
Charleston, WV MSA	1
Charlotte—Gastonia—Rock Hill, NC—SC MSA	1
Charlottesville, VA MSA	1
Chattanooga, TN-GA MSA	1
Chicago—Gary—Kenosha, IL—IN—WI CMSA	1
Chico-Paradise, CA MSA	0
Cincinnati-Hamilton, OH-KY	0
Clarksville-Hopkinsville,	1
Cleveland-Arkon, OH CMSA	1
Colorado Springs, CO MSA	0
Columbia, MO MSA	0
Columbia, SC MSA	1
Columbus, GA-AL MSA	0
Columbus, OH MSA	0
Corpus Christi, TX MSA	0
Cumberland, MD-WV MSA	0
Dallas-Forth Worth, TX CMS	1
Danville, VA MSA	0
Davenport-Moline-Rock Island, IA-IL MSA	1
Dayton-Springfield, OH MSA	1
Daytona Beach, FL MSA	0
Decatur, AL MSA	0
Decatur, IL MSA	1
Denver--Boulder--Greeley, CO CMSA	1
Des Moines, IA MSA	0
Detroit--Ann Arbor--Flint, MI CMSA	1
Dubuque, IA MSA	0
Duluth-Superior, MN-WI MSA	0
Eau Claire, WI MSA	1
El Paso, TX MSA	0
Elkhart-Goshen, IN MSA	0

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Elmira, NY MSA	0
Enid, OK MSA	0
Erie, PA MSA	0
Eugene-Springfield, OR MSA	1
Evansville--Henderson, IN--KY MSA	1
Fargo-Moorhead, ND-MN MSA	0
Fayetteville, NC MSA	1
Fayetteville--Springdale--Rogers, AR MSA	0
Flagstaff, AZ-UT MSA	1
Florence, AL MSA	0
Florence, SC MSA	1
Fort Collins-Loveland, CO MSA	0
Fort Myers-Cape Coral, FL	0
Fort Pierce-Port St. Lucie, FL MSA	0
Fort Smith, AR-OK MSA	0
Fort Walton Beach, FL MSA	0
Fort Wayne, IN MSA	0
Fresno, CA MSA	0
Gadsden, AL MSA	0
Gainesville, FL MSA	1
Glens Falls, NY MSA	0
Goldsboro, NC MSA	1
Grand Forks, ND-MN MSA	0
Grand Junction, CO MSA	0
Grand Rapids--Muskegon--Holland, MI MSA	1
Great Falls, MT MSA	0
Green Bay, WI MSA	0
Greensboro--Winston-Salem--High Point, NC MSA	1
Greenville, NC MSA	1
Greenville--Spartanburg--Anderson, SC MSA	0
Harrisburg--Lebanon--Carlisle, PA MSA	1
Hartford, CT MSA	1
Hattiesburg, MS MSA	1
Hickory--Morganton--Lenoir, NC MSA	1
Honolulu, HI MSA	0
Houma, LA MSA	0
Houston--Galveston--Brazoria, TX CMSA	1
Huntington--Ashland, WV--KY--OH MSA	0
Huntsville, AL MSA	0

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Indianapolis, IN MSA	1
Iowa City, IA MSA	0
Jackson, MI MSA	1
Jackson, MS MSA	1
Jackson, TN MSA	1
Jacksonville, FL MSA	1
Jacksonville, NC MSA	0
Jamestown, NY MSA	0
Janesville-Beloit, WI MSA	0
Johnson City--Kingsport--Bristol, TN--VA MSA	0
Johnstown, PA MSA	0
Jonesboro, AR MSA	0
Joplin, MO MSA	1
Kalamazoo-Battle Creek, MI	0
Kansas City, MO-KS MSA	1
Killeen-Temple, TX MSA	0
Knoxville, TN MSA	1
Kokomo, IN MSA	0
La Crosse, WI-MN MSA	0
Lafayette, LA MSA	0
Lafayette, IN MSA	0
Lake Charles, LA MSA	0
Lakeland-Winter Haven, FL MSA	0
Lancaster, PA MSA	0
Lansing-East Lansing, MI MSA	0
Laredo, TX MSA	0
Las Cruces, NM MSA	1
Las Vegas, NV-AZ MSA	0
Lawrence, KS MSA	0
Lawton, OK MSA	0
Lewiston-Auburn, ME MSA	0
Lexington, KY MSA	0
Lima, OH MSA	0
Lincoln, NE MSA	0
Little Rock--North Little Rock, AR MSA	0
Longview-Marshall, TX MSA	0
Los Angeles--Riverside--Orange County, CA CMSA	1
Louisville, KY-IN MSA	0
Lawton, OK MSA	0

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Lewiston-Auburn, ME MSA	0
Lexington, KY MSA	0
Lima, OH MSA	0
Lincoln, NE MSA	0
Little Rock--North Little Rock, AR MSA	0
Longview-Marshall, TX MSA	0
Los Angeles--Riverside--Orange County, CA CMSA	1
Louisville, KY-IN MSA	0
Lawton, OK MSA	0
Lewiston-Auburn, ME MSA	0
Lexington, KY MSA	0
Lima, OH MSA	0
Lincoln, NE MSA	0
Little Rock--North Little Rock, AR MSA	0
Longview-Marshall, TX MSA	0
Los Angeles--Riverside--Orange County, CA CMSA	1
Louisville, KY-IN MSA	0
Lubbock, TX MSA	0
Lynchburg, VA MSA	1
Macon, GA MSA	0
Madison, WI MSA	0
Mansfield, OH MSA	0
McAllen--Edinburg--Mission, TX MSA	0
Medford-Ashland, OR MSA	0
Melbourne--Titusville--Palm Bay, FL MSA	1
Memphis, TN-AR-MS MSA	0
Merced, CA MSA	1
Miami--Fort Lauderdale, FL CMSA	1
Milwaukee-Racine, WI CMSA	1
Minneapolis-St. Paul, MN-WI MSA	1
Missoula, MT MSA	-9
Mobile, AL MSA	0
Modesto, CA MSA	0
Monroe, LA MSA	0
Montgomery, AL MSA	0
Muncie, IN MSA	0
Myrtle Beach, SC MSA	0
Naples, FL MSA	1
Nashville, TN MSA	0

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
New London-Norwich, CT-RI MSA	1
New Orleans, LA MSA	1
New York--Northern New Jersey--Long Island, NY--NJ--CT--PA CMSA	1
Norfolk--Virginia Beach--Newport News, VA--NC MSA	1
Ocala, FL MSA	0
Odessa-Midland, TX MSA	0
Oklahoma City, OK MSA	0
Omaha, NE-IA MSA	1
Orlando, FL MSA	1
Owensboro, KY MSA	0
Panama City, FL MSA	1
Parkersburg-Marietta, WV-OH MSA	0
Pensacola, FL MSA	1
Peoria-Pekin, IL MSA	0
Philadelphia--Wilmington--Atlantic City, PA--NJ--DE--MD CMSA	1
Phoenix-Mesa, AZ MSA	1
Pine Bluff, AR MSA	0
Pittsburgh, PA MSA	1
Pittsfield, MA MSA	0
Pocatello, ID MSA	1
Portland, ME MSA	0
Portland--Salem, OR--WA CMSA	1
Providence--Fall River--Warwick, RI--MA MSA	1
Provo-Orem, UT MSA	0
Pueblo, CO MSA	0
Punta Gorda, FL MSA	0
Raleigh-Durham-Chapel Hill, NC MSA	1
Rapid City, SD MSA	1
Reading, PA MSA	1
Redding, CA MSA	0
Reno, NV MSA	0
Richland--Kennewick--Pasco, WA MSA	1
Richmond-Petersburg, VA MSA	1
Roanoke, VA MSA	0
Rochester, MN MSA	1
Rochester, NY MSA	1
Rockford, IL MSA	0
Rocky Mount, NC MSA	1

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Sacramento-Yolo, CA CMSA	1
Saginaw--Bay City--Midland, MI MSA	0
St. Cloud, MN MSA	0
St. Joseph, MO MSA	0
St. Louis, MO-IL MSA	1
Salinas, CA MSA	0
Salt Lake City-Ogden, UT MSA	0
San Angelo, TX MSA	0
San Antonio, TX MSA	1
San Diego, CA MSA	0
San Francisco--Oakland--San Jose, CA CMSA	1
San Luis Obispo--Atascadero--Paso Robles, CA MSA	1
Santa Barbara--Santa Maria--Lompoc, CA MSA	0
Santa Fe, NM MSA	0
Sarasota-Bradenton, FL MSA	1
Savannah, GA MSA	1
Scranton--Wilkes-Barre--Hazleton, PA MSA	0
Seattle--Tacoma--Bremerton, WA CMSA	1
Sharon, PA MSA	1
Sheboygan, WI MSA	0
Sherman-Denison, TX MSA	0
Shreveport--Bossier City, LA MSA	1
Sioux City, IA-NE MSA	0
Sioux Falls, SD MSA	1
South Bend, IN MSA	0
Spokane, WA MSA	0
Springfield, IL MSA	0
Springfield, MO MSA	0
Springfield, MA MSA	1
State College, PA MSA	0
Steubenville--Weirton, OH--WV MSA	1
Stockton-Lodi, CA MSA	1
Sumter, SC MSA	0
Syracuse, NY MSA	0
Tallahassee, FL MSA	1
Tampa--St. Petersburg--Clearwater, FL MSA	1
Terre Haute, IN MSA	0
Texarkana, TX--Texarkana, AR MSA	0
Toledo, OH MSA	1

MSA	FORMATION OF REGIONAL PARTNERSHIP AFTER 1990
Topeka, KS MSA	0
Tucson, AZ MSA	1
Tulsa, OK MSA	0
Tuscaloosa, AL MSA	0
Tyler, TX MSA	0
Utica-Rome, NY MSA	1
Victoria, TX MSA	0
Visalia--Tulare--Porterville, CA MSA	0
Waco, TX MSA	0
Waterbury, CT PMSA	1
Waterloo--Cedar Falls, IA MSA	0
Wausau, WI MSA	0
West Palm Beach--Boca Raton, FL MSA	0
Wheeling, WV-OH MSA	0
Wichita, KS MSA	0
Wichita Falls, TX MSA	0
Williamsport, PA MSA	0
Wilmington, NC MSA	1
Yakima, WA MSA	0
York, PA MSA	0
Youngstown-Warren, OH MSA	0
Yuba City, CA MSA	1
Yuma, AZ MSA	1

APPENDIX B

Metropolitan Area Prosperity Index Calculations by Lewis Mumford Center

Prosperity index for the metro region, city and suburb were calculated by standardizing the values for each economic indicator (creating a Z-score). For those indicators where a higher value means a less healthy region (poverty, unemployment, housing vacancy), we took the inverse of the score by multiplying by -1. Then all the indicators were summed and a ranking was assigned - with a higher score leading to a higher (better) rank. To calculate the index for city-suburb disparities, we first created ratios of the city value to the suburb value for each variable, then standardized these, corrected their direction, and summed the values.

Data : Data for 1990 are taken from the STF4a census files at the census tract level.

Description of Variables

College Educated: Percentage of persons aged 25 and over who have at least a bachelor's degree.

Management, Professional and Related Occupations: Percentage of employed civilians age 16 and over who have an occupation in the general census occupation category of "managerial and professional specialty occupations." The 1990 percentages have been calculated based on the Mumford Center's definition of professional/managerial occupations

Median Household Income: This is the median income for all households. A household includes all the people who occupy a housing unit as their usual place of residence. The median income divides the income distribution into two equal groups, one having incomes above the median, and other having incomes below the median. Median household income has been reported by the Census Bureau for metro areas and individual cities. For suburbs, for cities where there is more than one central city in the metropolis, and for metro areas that cross state lines, we provide estimates of the median income. These are based on a Pareto curve interpolation from grouped data. For 1990, where income has been reported in 25 categories, the estimates are quite precise.

Per Capita Income: This is the average income figure obtained by dividing aggregate income by total population of an area.

Poverty: Percentage of persons living below the poverty level. Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "*below the poverty level.*"

Owner-Occupied Housing Unit: Percentage of owner-occupied housing units. From this the percent homeownership is derived. A housing unit is owner occupied if the owner or co-owner lives in the unit even if it is mortgaged or not fully paid for.

Unemployed: Percentage of persons in the labor force aged 16 and over classed as unemployed. All civilians 16 years old and over are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week, and (2) were actively looking for work during the last 4 weeks, and (3) were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off, and were available for work except for temporary illness.

Vacancy Status: Percentage of unoccupied housing units.

(Source: Lewis Mumford Center Web technical note:
<http://mumford.albany.edu/census/CityProfiles/tnotes.htm>)

The last row shows index values that combine all the indicators. Some metro areas have improved on some indicators but declined on others. To evaluate the net change, we calculate a standardized score on every indicator (based on the 1990 mean and standard deviation) and use the average of these scores as an overall index value, where a higher value indicates more prosperity. This index is similar to the one on which we have ranked metro areas, cities, and suburbs above. The overall index of city-suburb disparity (last two columns of the last row) is the city index value minus the suburb index value -- a positive value means that the city is doing better than the suburbs.

Table: Examples of Mumford Center Socioeconomic index: Tallahassee MSA Case

	Metro Region		Central City		Suburb		Central City-Suburb Disparity	
	1990	2000	1990	2000	1990	2000	1990	2000
Median HH income	34,016	36,441	30,391	30,571	39,190	42,802	0.78	0.71
Per capita income	17,026	19,990	17,151	18,981	16,884	21,124	1.02	0.9
% Below poverty	18.9	18.5	22.4	24.7	15.2	11.9	0.68	0.48
% College	32.4	36.7	40.7	45	24	29.1	1.7	1.54
% Professional	39.8	42.8	43.3	46	35.6	39	1.22	1.18
% Unemployed	4.9	8.2	5.6	11.1	4.1	4.6	0.74	0.42
% Homeowners	59.7	60	45.1	43.8	79.1	80.8	0.57	0.54
% Vacant housing	8.3	7.6	8.7	7.6	7.7	7.7	0.89	1.01
							City Index - Suburban Index	
Index Score	0.26	0.55	0.03	0	0.6	1.26	-0.57	-1.26

(Source: Lewis Mumford Center Web technical note:
<http://mumford.albany.edu/census/CityProfiles/tnotes.htm>)

APPENDIX C
METROPOLITAN AREA PROSPERITY INDEX

<i>MSA AREA</i>	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
Abilene, TX MSA	-2.65	0.25	-3.12
Albany, GA MSA	-7.57	-5.97	-0.89
Albany-Schenectady-Troy, NY MSA	4.2	0.21	4.38
Albuquerque, NM MSA	0.79	4.64	-2.51
Alexandria, LA MSA	-6.73	-5.39	-5.81
Allentown-Bethlehem-Easton, PA MSA	3.69	2.08	3.15
Altoona, PA MSA	-3.84	-3.47	-2.97
Amarillo, TX MSA	-2.89	-0.19	-0.4
Anchorage, AK MSA	5.82	9.02	
Anniston, AL MSA	-4.58	-3.94	-4.65
Appleton-Oshkosh-Neenah, WI MSA	3.62	6.12	1.56
Asheville, NC MSA	0.5	1.05	-0.24
Athens, GA MSA	-1.97	-1.38	0.92
Atlanta, GA MSA	4.51	-3.62	3.25
Augusta-Aiken, GA-SC MSA	-0.72	0.07	-0.2
Austin-San Marcos, TX MSA	0.36	1.46	1.75
Bakersfield, CA MSA	-5.79	2.71	-9.14
Bangor, ME MSA	0.96	2.22	0.11
Baton Rouge, LA MSA	-2.56	-2.45	-1.64
Beaumont-Port Arthur, TX MSA	-4.38	-3.5	-3.02
Bellingham, WA MSA	-0.17	2.74	-1.51
Benton Harbor, MI MSA	-2.32	-27.27	-1.85
Billings, MT MSA	0.19	3.13	-1.51
Biloxi-Gulfport-Pascagoula, MS MSA	-5.35	-3.24	-5.27
Binghamton, NY MSA	2.71	-2.65	2.59
Birmingham, AL MSA	0.04	-5.43	2.15
Bismarck, ND MSA	2.74	6.84	-1.28
Bloomington, IN MSA	0.17	0.31	1.3
Bloomington-Normal, IL MSA	4.34	6.42	3.34
Boise City, ID MSA	3.18	6.39	0.28
Boston—Worcester—Lawrence, MA—NH—ME—CT CMSA	8.08	2.37	7.69
Brownsville-Harlingen-San Benito, TX MSA	-17.38	-10.79	-17.33
Bryan-College Station, TX MSA	-4.21	-1.85	1.71
Buffalo-Niagara Falls, NY MSA	-0.26	-7.39	3.15
Burlington, VT MSA	6.86	2.41	6.21
Canton-Massillon, OH MSA	-0.8	-5.08	0.6
Casper, WY MSA	-1.1	2.76	-5.74
Cedar Rapids, IA MSA	4.6	7.09	2.93

<i>MSA AREA</i>	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
Champaign-Urbana, IL MSA	3.25	5	1.58
Charleston-North Charleston, SC MSA	-1.34	-2.04	-1.45
Charleston, WV MSA	-1.17	3.2	-3.19
Charlotte-Gastonia-Rock Hill, NC-SC MSA	2.77	5.16	1.07
Charlottesville, VA MSA	6.22	2.51	6.15
Chattanooga, TN-GA MSA	-1.43	-1.65	-1.1
Chicago—Gary—Kenosha, IL—IN—WI CMSA	3.51	-2.83	8.12
Chico-Paradise, CA MSA	-4.49	-2.21	-4.7
Cincinnati-Hamilton, OH-KY-IN CMSA	2.08	-3.23	2.59
Clarksville-Hopkinsville, TN-KY MSA	-4.98	-1.02	-6.3
Cleveland-Arkon, OH CMSA	1.12	-9.42	4.3
Colorado Springs, CO MSA	1.07	4.05	-1.17
Columbia, MO MSA	2.82	3.56	3.04
Columbia, SC MSA	3.71	1.12	2.45
Columbus, GA-AL MSA	-5.8	-0.96	-8.28
Columbus, OH MSA	2.44	1.26	5.27
Corpus Christi, TX MSA	-7.38	-1.93	-11.29
Cumberland, MD-WV MSA	-4.88	-7.14	-4.03
Dallas-Forth Worth, TX CMSA	1.91	0.62	3.59
Danville, VA MSA	-5.5	-3.63	-4.23
Davenport-Moline-Rock Island, IA-IL MSA	-0.01	1.61	-0.14
Dayton-Springfield, OH MSA	1.93	-5.26	3.86
Daytona Beach, FL MSA	-1.8	-7.2	-1.96
Decatur, AL MSA	-1.08	4.38	-3.81
Decatur, IL MSA	-0.66	0.5	3.22
Denver—Boulder—Greeley, CO CMSA	5.01	1.79	4.67
Des Moines, IA MSA	5.06	3.23	6.47
Detroit—Ann Arbor—Flint, MI CMSA	1.06	-10.15	4.47
Dubuque, IA MSA	2.13	4.02	2.25
Duluth-Superior, MN-WI MSA	-4.45	1.48	-6.65
Eau Claire, WI MSA	-1.05	1.76	-2.23
El Paso, TX MSA	-9	-3.04	-15.91
Elkhart-Goshen, IN MSA	2.36	1.06	3.6
Elmira, NY MSA	-1.12	-6.97	2.17
Enid, OK MSA	-3.26	-1.47	-0.29
Erie, PA MSA	-1.45	-3.23	0.56
Eugene-Springfield, OR MSA	-1.63	1.97	-3
Evansville-Henderson, IN-KY MSA	-0.66	-1.26	2.81
Fargo-Moorhead, ND-MN MSA	1.01	3.43	0.5
Fayetteville, NC MSA	-3.66	1.13	-5.96
Fayetteville-Springdale-Rogers, AR MSA	-0.6	2.03	-2.11
Flagstaff, AZ-UT MSA	-9.73	0.54	-13.94
Florence, AL MSA	-2.64	-0.8	-3.38
Florence, SC MSA	-2.94	1.41	-4.6

<i>MSA AREA</i>	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
Fort Collins-Loveland, CO MSA	3.93	6.11	2.84
Fort Myers-Cape Coral, FL MSA	-1.07	1.07	-2.11
Fort Pierce-Port St. Lucie, FL MSA	-1.04	-6.94	-0.6
Fort Smith, AR-OK MSA	-4.92	0.21	-7.08
Fort Walton Beach, FL MSA	-0.18	4.44	-2.47
Fort Wayne, IN MSA	2.82	2.02	3.25
Fresno, CA MSA	-6.57	-2.59	-6.75
Gadsden, AL MSA	-5.01	-4.22	-3.57
Gainesville, FL MSA	-0.35	2.01	-1.84
Glens Falls, NY MSA	-2.78	2.24	-4.31
Goldsboro, NC MSA	-3.59	-3.79	-2.75
Grand Forks, ND-MN MSA	-1.87	2.86	-4.72
Grand Junction, CO MSA	-2.71	-2.98	-2.15
Grand Rapids-Muskegon-Holland, MI MSA	2.21	0.03	1.98
Great Falls, MT MSA	-1.8	1.74	-4.06
Green Bay, WI MSA	2.62	1.98	4.24
Greensboro--Winston-Salem--High Point, NC MSA	2.15	4.01	0.76
Greenville, NC MSA	-2.88	0.31	-3.86
Greenville-Spartanburg-Anderson, SC MSA	0.19	-0.46	-1.07
Harrisburg-Lebanon-Carlisle, PA MSA	4.05	-4.03	3.55
Hartford, CT MSA	8.56	-4.66	7.96
Hattiesburg, MS MSA	-6.08	-6.49	-3.61
Hickory-Morganton-Lenoir, NC MSA	-0.13	2.04	-1.71
Honolulu, HI MSA	5.43	8	2.76
Houma, LA MSA	-7.71	-3.87	-8.36
Houston—Galveston—Brazoria, TX CMSA	-0.54	-1.57	2.55
Huntington-Ashland, WV-KY-OH MSA	-6.35	-2.39	-7.19
Huntsville, AL MSA	5.44	9.22	1.23
Indianapolis, IN MSA	2.65	2.86	4.1
Iowa City, IA MSA	6.27	6.91	5.61
Jackson, MI MSA	-1.51	-5.92	-0.23
Jackson, MS MSA	-0.91	-0.74	0.65
Jackson, TN MSA	-3.24	-2.06	-1.4
Jacksonville, FL MSA	0.63	2.71	0.59
Jacksonville, NC MSA	-5.65	0.4	-8.65
Jamestown, NY MSA	-4.75	-3.84	-4.77
Janesville-Beloit, WI MSA	-0.18	2.25	0.29
Johnson City-Kingsport-Bristol, TN-VA MSA	-3.03	1.11	-4.61
Johnstown, PA MSA	-5.31	-13.04	-4.69
Jonesboro, AR MSA	-3.37	0.92	-6.55
Joplin, MO MSA	-3.5	-1.68	-4.14
Kalamazoo-Battle Creek, MI MSA	-0.35	-1.28	-0.19
Kansas City, MO-KS MSA	3.17	0.8	4.51
Killeen-Temple, TX MSA	-5.96	-3.71	-5.73

<i>MSA AREA</i>	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
Knoxville, TN MSA	-0.2	-1.87	-0.09
Kokomo, IN MSA	0.45	-0.99	2.93
La Crosse, WI-MN MSA	0.85	-1.24	3.14
Lafayette, LA MSA	-8.65	0.37	-11.16
Lafayette, IN MSA	1.72	3.96	-0.31
Lake Charles, LA MSA	-5	-3.72	-3.91
Lakeland-Winter Haven, FL MSA	-4.61	-0.35	-6.08
Lancaster, PA MSA	4.04	-4.02	3.03
Lansing-East Lansing, MI MSA	2.65	0.05	4.27
Laredo, TX MSA	-15.45	-8.82	-22.78
Las Cruces, NM MSA	-6.19	0.71	-9.49
Las Vegas, NV-AZ MSA	-3.81	0.51	-5.66
Lawrence, KS MSA	0.74	2.56	3.72
Lawton, OK MSA	-4.93	-2.23	-3.6
Lewiston-Auburn, ME MSA	-3.77	-1.19	-1.58
Lexington, KY MSA	0.53	5.24	-3.85
Lima, OH MSA	-1.81	-8.33	0.54
Lincoln, NE MSA	4.24	6.2	7.14
Little Rock-North Little Rock, AR MSA	-0.13	2.85	-1.79
Longview-Marshall, TX MSA	-5.08	-1.54	-5.86
Los Angeles--Riverside--Orange County, CA CMSA	-0.5	1.41	-0.66
Louisville, KY-IN MSA	-0.05	-2.91	1.01
Lubbock, TX MSA	-3.23	0.21	-5.08
Lynchburg, VA MSA	0.27	1.18	-0.52
Macon, GA MSA	-2.24	-4.87	-0.31
Madison, WI MSA	7.36	8.41	5.54
Mansfield, OH MSA	-2.52	-2.83	-2.37
McAllen-Edinburg-Mission, TX MSA	-18.59	-7.43	-21.33
Medford-Ashland, OR MSA	-2.13	2.33	-4.21
Melbourne-Titusville-Palm Bay, FL MSA	2.89	2.87	2.26
Memphis, TN-AR-MS MSA	-2.7	-1.86	2.74
Merced, CA MSA	-8.44	-3.63	-9.15
Miami--Fort Lauderdale, FL CMSA	-4.6	-11.27	-2.67
Milwaukee-Racine, WI CMSA	2.11	-2.97	7.56
Minneapolis-St. Paul, MN-WI MSA	7.58	3.02	6.93
Missoula, MT MSA	-2.02	0.58	-1.73
Mobile, AL MSA	-5.67	-1.15	-6.79
Modesto, CA MSA	-4.53	1.73	-7.97
Monroe, LA MSA	-6.54	-7.63	-4.37
Montgomery, AL MSA	-1.33	1.74	-2.13
Muncie, IN MSA	-3.47	-4.7	2.35
Myrtle Beach, SC MSA	-7.15	-2.84	-8.12
Naples, FL MSA	1.09	17.13	-3.16

MSA AREA	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
Nashville, TN MSA	1.97	2.96	2.18
New London-Norwich, CT-RI MSA	3.97	-0.58	3.56
New Orleans, LA MSA	-6.23	-7.47	-3.7
New York—Northern New Jersey—Long Island, NY—NJ— CT—PA CMSA	-2.86	-0.09	10.16
Norfolk-Virginia Beach-Newport News, VA-NC MSA	0.67	2.82	2.31
Ocala, FL MSA	-4.64	-1.76	-5.45
Odessa-Midland, TX MSA	-3.12	1.09	-7.56
Oklahoma City, OK MSA	-1.2	0.73	-1.47
Omaha, NE-IA MSA	3.53	3.81	5.07
Orlando, FL MSA	1.44	0.37	-0.25
Owensboro, KY MSA	-3.1	-1.61	-0.21
Panama City, FL MSA	-5.61	-2.31	-6.39
Parkersburg-Marietta, WV-OH MSA	-1.77	-2.05	-1.53
Pensacola, FL MSA	-2.34	3.27	-4.44
Peoria-Pekin, IL MSA	1.51	2	1.4
Philadelphia—Wilmington—Atlantic City, PA—NJ—DE— MD CMSA	5.23	-2.74	7.63
Phoenix-Mesa, AZ MSA	-0.09	2.96	-2.41
Pine Bluff, AR MSA	-8.42	-5.87	-4.75
Pittsburgh, PA MSA	0.78	-2.24	-0.17
Pittsfield, MA MSA	2.13	4.26	1.51
Pocatello, ID MSA	-0.83	1.83	-1.32
Portland, ME MSA	4.14	2.12	3.88
Portland-Vancouver, OR-WA PMSA	3.24	2.95	2.71
Providence-Fall River-Warwick, RI-MA MSA	0.27	-1.6	2.47
Provo-Orem, UT MSA	0.38	2.47	0.24
Pueblo, CO MSA	-6.17	-2.75	-3.31
Punta Gorda, FL MSA	-0.72	7.86	-3.04
Raleigh-Durham-Chapel Hill, NC MSA	6.53	7.82	4.56
Rapid City, SD MSA	-1.28	2.79	-4.39
Reading, PA MSA	3.38	-5.02	4.43
Redding, CA MSA	-3.93	0.93	-5.56
Reno, NV MSA	0.83	2.9	0.57
Richland-Kennewick-Pasco, WA MSA	0.78	3.05	0.86
Richmond-Petersburg, VA MSA	5.09	-1.24	5.8
Roanoke, VA MSA	2.89	-0.59	5.3
Rochester, NY MSA	4.91	-3.52	5.43
Rockford, IL MSA	2.03	2.87	1.52
Rocky Mount, NC MSA	-4.25	-0.5	-5.49
Sacramento, CA PMSA	2.24	2.48	0.92
Saginaw-Bay City-Midland, MI MSA	-1.77	-1.92	-0.9
St. Cloud, MN MSA	0.1	1.22	-0.56
St. Joseph, MO MSA	-4.48	-2.23	-1.27

<i>MSA AREA</i>	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
St. Louis, MO-IL MSA	2.46	-5.99	3.78
Salinas, CA MSA	-1.3	0.51	-1.49
Salt Lake City-Ogden, UT MSA	3.07	0.77	2.41
San Angelo, TX MSA	-4.87	-2.05	-0.24
San Antonio, TX MSA	-4.44	-2.5	0.76
San Diego, CA MSA	3.26	6.34	0.66
San Francisco—Oakland—San Jose, CA CMSA	8.61	6.43	9.24
San Luis Obispo-Atascadero-Paso Robles, CA MSA	0.92	3.01	-0.35
Santa Barbara-Santa Maria-Lompoc, CA MSA	3.68	3.25	4.79
Santa Fe, NM MSA	8.77	8.43	7.91
Sarasota-Bradenton, FL MSA	1.77	0.55	0.52
Savannah, GA MSA	-3.18	-4.34	0.8
Scranton—Wilkes-Barre—Hazleton, PA MSA	-1.94	-2.69	-2.52
Seattle-Bellevue-Everett, WA PMSA	7.7	8.88	5.1
Sharon, PA MSA	-2.05	-3.31	-2.75
Sheboygan, WI MSA	2.21	2.27	2.92
Sherman-Denison, TX MSA	-3.78	-1.49	-3.79
Shreveport-Bossier City, LA MSA	-7.55	-3.78	-7.25
Sioux City, IA-NE MSA	-0.75	2.31	-2.06
Sioux Falls, SD MSA	3.7	5.78	2.79
South Bend, IN MSA	2.12	0.93	3.15
Spokane, WA MSA	-0.6	0.22	0.29
Springfield, IL MSA	4.68	5.57	4.28
Springfield, MO MSA	-1.33	-0.77	0.25
Springfield, MA MSA	0.8	-0.6	2.64
State College, PA MSA	0.99	-2.41	1.75
Steubenville-Weirton, OH-WV MSA	-4.85	-1.55	-5.59
Stockton-Lodi, CA MSA	-4.4	-1.74	-3.31
Sumter, SC MSA	-5.84	-1.79	-6.85
Syracuse, NY MSA	1.92	-3.39	2.77
Tallahassee, FL MSA	2.07	3.04	2.32
Tampa-St. Petersburg-Clearwater, FL MSA	-0.19	0.16	-1.13
Terre Haute, IN MSA	-2.67	-2.71	-2.04
Texarkana, TX-Texarkana, AR MSA	-5.21	-4.26	-3.89
Toledo, OH MSA	-0.92	-1.87	3.97
Topeka, KS MSA	3.48	3.59	8.97
Tucson, AZ MSA	-2.34	-2.63	2.19
Tulsa, OK MSA	-0.16	2.49	-1.47
Tuscaloosa, AL MSA	-3.15	-1.44	-2.24
Tyler, TX MSA	-2.5	-0.66	-2.04
Utica-Rome, NY MSA	-2.14	-3.1	-0.98
Victoria, TX MSA	-3.78	-0.67	-2.82
Visalia-Tulare-Porterville, CA MSA	-9.21	-0.28	-13.15
Waco, TX MSA	-5.76	-7.18	-0.48

<i>MSA AREA</i>	<i>1990 overall metropolitan prosperity index</i>	<i>1990 overall cc prosperity index</i>	<i>1990 overall sb prosperity index</i>
Waterbury, CT PMSA	3.56	0.3	7.58
Waterloo-Cedar Falls, IA MSA	-1.36	1.53	-0.44
Wausau, WI MSA	3.02	4	1.58
West Palm Beach-Boca Raton, FL MSA	3.72	6.16	1.08
Wheeling, WV-OH MSA	-5.11	-0.52	-6.6
Wichita, KS MSA	2.37	3.52	3.19
Wichita Falls, TX MSA	-3.81	-1.04	-3.56
Williamsport, PA MSA	-3.14	-5.57	-2.06
Wilmington, NC MSA	-4.4	-2.51	-4.15
Yakima, WA MSA	-7.17	-3.9	-7.23
York, PA MSA	3.84	-6.16	3.13
Youngstown-Warren, OH MSA	-3.4	-8.14	-2.09
Yuba City, CA MSA	-7.12	-3.06	-7.91
Yuma, AZ MSA	-10.34	-1.47	-16.36

APPENDIX D
DISSIMILARITY INDEX BETWEEN CENTER CITIES AND SUBURBAN AREA IN
METROPOLITAN AERA

<i>MSA AREA</i>	<i>1990 std. cc socio-economic index¹³</i>	<i>1990 std. sb socio-economic index¹⁴</i>	<i>std. cc -sb index in 1990¹⁵</i>	<i>Absolute value of metropolitan dissimilarity index¹⁶</i>
Abilene, TX MSA	-0.35	-0.2	-0.15	0.15
Albany, GA MSA	-1.43	0.16	-1.59	1.59
Albany-Schenectady-Troy, NY MSA	-0.46	0.94	-1.4	1.4
Albuquerque, NM MSA	0.21	-0.11	0.32	0.32
Alexandria, LA MSA	-1.27	-0.57	-0.7	0.7
Allentown-Bethlehem-Easton, PA MSA	-0.2	0.75	-0.95	0.95
Altoona, PA MSA	-0.96	-0.15	-0.81	0.81
Amarillo, TX MSA	-0.47	0.21	-0.68	0.68
Anchorage, AK MSA	0.73			
Anniston, AL MSA	-1.04	-0.4	-0.64	0.64
Appleton-Oshkosh-Neenah, WI MSA	0.39	0.52	-0.13	0.13
Asheville, NC MSA	-0.26	0.23	-0.49	0.49
Athens, GA MSA	-0.63	0.41	-1.04	1.04
Atlanta, GA MSA	-1	0.79	-1.79	1.79
Augusta-Aiken, GA-SC MSA	-0.43	0.25	-0.68	0.68
Austin-San Marcos, TX MSA	-0.23	0.55	-0.78	0.78
Bakersfield, CA MSA	-0.19	-1.01	0.82	0.82
Bangor, ME MSA	-0.15	0.3	-0.45	0.45
Baton Rouge, LA MSA	-0.78	0.04	-0.82	0.82
Beaumont-Port Arthur, TX MSA	-0.97	-0.16	-0.81	0.81
Bellingham, WA MSA	-0.08	0.06	-0.14	0.14
Benton Harbor, MI MSA	-4.84	0.02	-4.86	4.86
Billings, MT MSA	0.03	0.04	-0.01	0.01
Biloxi-Gulfport-Pascagoula, MS MSA	-0.88	-0.51	-0.37	0.37

¹³ 1990 standardized central cities socio-economic index

¹⁴ 1990 standardized suburban area socio-economic index

¹⁵ = (1990 standardized central cities socio-economic index)-(1990 standardized suburban area socio-economic index)

¹⁶ = (1990 standardized central cities socio-economic index)-(1990 standardized suburban area socio-economic index)

<i>MSA AREA</i>	<i>1990 std. cc socio- economic index</i>	<i>1990 std. sb socio- economic index</i>	<i>std. cc -sb index in 1990</i>	<i>Absolute value of metropolitan dissimilarity index</i>
Binghamton, NY MSA	-0.89	0.67	-1.56	1.56
Birmingham, AL MSA	-1.26	0.6	-1.86	1.86
Bismarck, ND MSA	0.53	0.08	0.45	0.45
Bloomington, IN MSA	-0.39	0.47	-0.86	0.86
Bloomington-Normal, IL MSA	0.46	0.77	-0.31	0.31
Boise City, ID MSA	0.47	0.32	0.15	0.15
Boston—Worcester—Lawrence, MA—NH—ME—CT CMSA	-0.23	1.46	-1.69	1.69
Brownsville-Harlingen-San Benito, TX MSA	-2.09	-2.29	0.2	0.2
Bryan-College Station, TX MSA	-0.66	0.51	-1.17	1.17
Buffalo-Niagara Falls, NY MSA	-1.61	0.75	-2.36	2.36
Burlington, VT MSA	-0.16	1.19	-1.35	1.35
Canton-Massillon, OH MSA	-1.28	0.38	-1.66	1.66
Casper, WY MSA	0.03	-0.58	0.61	0.61
Cedar Rapids, IA MSA	0.5	0.72	-0.22	0.22
Champaign-Urbana, IL MSA	0.33	0.54	-0.21	0.21
Charleston-North Charleston, SC MSA	-0.73	0.08	-0.81	0.81
Charleston, WV MSA	0.02	-0.19	0.21	0.21
Charlotte-Gastonia-Rock Hill, NC-SC MSA	0.26	0.44	-0.18	0.18
Charlottesville, VA MSA	-0.1	1.2	-1.3	1.3
Chattanooga, TN-GA MSA	-0.68	0.12	-0.8	0.8
Chicago—Gary—Kenosha, IL—IN—WI CMSA	-1.01	1.5	-2.51	2.51
Chico-Paradise, CA MSA	-0.85	-0.38	-0.47	0.47
Cincinnati-Hamilton, OH-KY-IN CMSA	-0.98	0.68	-1.66	1.66
Clarksville-Hopkinsville, TN-KY MSA	-0.63	-0.61	-0.02	0.02
Cleveland-Arkon, OH CMSA	-1.95	0.94	-2.89	2.89
Colorado Springs, CO MSA	0.14	0.13	0.01	0.01
Columbia, MO MSA	0.11	0.72	-0.61	0.61
Columbia, SC MSA	-0.28	0.65	-0.93	0.93
Columbus, GA-AL MSA	-0.64	-0.9	0.26	0.26
Columbus, OH MSA	-0.31	1.07	-1.38	1.38
Corpus Christi, TX MSA	-0.77	-1.37	0.6	0.6
Cumberland, MD-WV MSA	-1.53	-0.32	-1.21	1.21
Dallas-Forth Worth, TX CMSA	-0.39	0.83	-1.22	1.22
Danville, VA MSA	-1.04	-0.35	-0.69	0.69
Davenport-Moline-Rock Island, IA-IL MSA	-0.25	0.28	-0.53	0.53
Dayton-Springfield, OH MSA	-1.29	0.87	-2.16	2.16
Daytona Beach, FL MSA	-1.47	-0.01	-1.46	1.46
Decatur, AL MSA	0.15	-0.29	0.44	0.44
Decatur, IL MSA	-0.41	0.76	-1.17	1.17
Denver—Boulder—Greeley, CO CMSA	-0.18	0.99	-1.17	1.17
Des Moines, IA MSA	0	1.25	-1.25	1.25
Detroit—Ann Arbor—Flint, MI CMSA	-2.16	0.97	-3.13	3.13

<i>MSA AREA</i>	<i>1990 std. cc socio- economic index</i>	<i>1990 std. sb socio- economic index</i>	<i>std. cc -sb index in 1990</i>	<i>Absolute value of metropolitan dissimilarity index</i>
Dubuque, IA MSA	0.11	0.6	-0.49	0.49
Duluth-Superior, MN-WI MSA	-0.28	-0.74	0.46	0.46
Eau Claire, WI MSA	-0.24	-0.05	-0.19	0.19
El Paso, TX MSA	-1	-2.03	1.03	1.03
Elkhart-Goshen, IN MSA	-0.31	0.8	-1.11	1.11
Elmira, NY MSA	-1.57	0.59	-2.16	2.16
Enid, OK MSA	-0.56	0.2	-0.76	0.76
Erie, PA MSA	-0.98	0.36	-1.34	1.34
Eugene-Springfield, OR MSA	-0.23	-0.15	-0.08	0.08
Evansville-Henderson, IN-KY MSA	-0.66	0.68	-1.34	1.34
Fargo-Moorhead, ND-MN MSA	0.04	0.35	-0.31	0.31
Fayetteville, NC MSA	-0.34	-0.55	0.21	0.21
Fayetteville-Springdale-Rogers, AR MSA	-0.11	-0.04	-0.07	0.07
Flagstaff, AZ-UT MSA	-0.37	-1.8	1.43	1.43
Florence, AL MSA	-0.58	-0.23	-0.35	0.35
Florence, SC MSA	-0.28	-0.39	0.11	0.11
Fort Collins-Loveland, CO MSA	0.42	0.67	-0.25	0.25
Fort Myers-Cape Coral, FL MSA	-0.24	-0.04	-0.2	0.2
Fort Pierce-Port St. Lucie, FL MSA	-1.46	0.2	-1.66	1.66
Fort Smith, AR-OK MSA	-0.39	-0.77	0.38	0.38
Fort Walton Beach, FL MSA	0.18	-0.06	0.24	0.24
Fort Wayne, IN MSA	-0.16	0.75	-0.91	0.91
Fresno, CA MSA	-0.95	-0.66	-0.29	0.29
Gadsden, AL MSA	-1.08	-0.25	-0.83	0.83
Gainesville, FL MSA	-0.12	0.03	-0.15	0.15
Glens Falls, NY MSA	-0.18	-0.36	0.18	0.18
Goldsboro, NC MSA	-1.03	-0.12	-0.91	0.91
Grand Forks, ND-MN MSA	-0.05	-0.4	0.35	0.35
Grand Junction, CO MSA	-0.94	-0.03	-0.91	0.91
Grand Rapids-Muskegon-Holland, MI MSA	-0.51	0.57	-1.08	1.08
Great Falls, MT MSA	-0.2	-0.3	0.1	0.1
Green Bay, WI MSA	-0.24	0.92	-1.16	1.16
Greensboro--Winston-Salem--High Point, NC MSA	0.11	0.4	-0.29	0.29
Greenville, NC MSA	-0.44	-0.27	-0.17	0.17
Greenville-Spartanburg-Anderson, SC MSA	-0.53	0.13	-0.66	0.66
Harrisburg-Lebanon-Carlisle, PA MSA	-1.08	0.82	-1.9	1.9
Hartford, CT MSA	-1.29	1.49	-2.78	2.78
Hattiesburg, MS MSA	-1.4	-0.27	-1.13	1.13
Hickory-Morganton-Lenoir, NC MSA	-0.16	0.03	-0.19	0.19
Honolulu, HI MSA	0.64	0.75	-0.11	0.11
Houma, LA MSA	-1.04	-0.95	-0.09	0.09
Houston--Galveston--Brazoria, TX CMSA	-0.69	0.69	-1.38	1.38
Huntington-Ashland, WV-KY-OH MSA	-0.8	-0.78	-0.02	0.02

<i>MSA AREA</i>	<i>1990 std. cc socio- economic index</i>	<i>1990 std. sb socio- economic index</i>	<i>std. cc -sb index in 1990</i>	<i>Absolute value of metropolitan dissimilarity index</i>
Huntsville, AL MSA	0.86	0.46	0.4	0.4
Indianapolis, IN MSA	-0.06	0.9	-0.96	0.96
Iowa City, IA MSA	0.58	1.13	-0.55	0.55
Jackson, MI MSA	-1.44	0.24	-1.68	1.68
Jackson, MS MSA	-0.58	0.37	-0.95	0.95
Jackson, TN MSA	-0.77	0.06	-0.83	0.83
Jacksonville, FL MSA	-0.06	0.38	-0.44	0.44
Jacksonville, NC MSA	-0.4	-0.96	0.56	0.56
Jamestown, NY MSA	-1.05	-0.43	-0.62	0.62
Janesville-Beloit, WI MSA	-0.23	0.34	-0.57	0.57
Johnson City-Kingsport-Bristol, TN-VA MSA	-0.29	-0.41	0.12	0.12
Johnstown, PA MSA	-2.42	-0.42	-2	2
Jonesboro, AR MSA	-0.29	-0.68	0.39	0.39
Joplin, MO MSA	-0.64	-0.33	-0.31	0.31
Kalamazoo-Battle Creek, MI MSA	-0.72	0.26	-0.98	0.98
Kansas City, MO-KS MSA	-0.34	0.96	-1.3	1.3
Killeen-Temple, TX MSA	-1	-0.52	-0.48	0.48
Knoxville, TN MSA	-0.72	0.27	-0.99	0.99
Kokomo, IN MSA	-0.66	0.72	-1.38	1.38
La Crosse, WI-MN MSA	-0.68	0.73	-1.41	1.41
Lafayette, LA MSA	-0.42	-1.36	0.94	0.94
Lafayette, IN MSA	0.12	0.26	-0.14	0.14
Lake Charles, LA MSA	-1.04	-0.3	-0.74	0.74
Lakeland-Winter Haven, FL MSA	-0.44	-0.61	0.17	0.17
Lancaster, PA MSA	-1.11	0.75	-1.86	1.86
Lansing-East Lansing, MI MSA	-0.52	0.92	-1.44	1.44
Laredo, TX MSA	-1.84	-3.11	1.27	1.27
Las Cruces, NM MSA	-0.38	-1.12	0.74	0.74
Las Vegas, NV-AZ MSA	-0.48	-0.48	0	0
Lawrence, KS MSA	-0.06	0.81	-0.87	0.87
Lawton, OK MSA	-0.75	-0.24	-0.51	0.51
Lewiston-Auburn, ME MSA	-0.7	0.04	-0.74	0.74
Lexington, KY MSA	0.32	-0.26	0.58	0.58
Lima, OH MSA	-1.74	0.37	-2.11	2.11
Lincoln, NE MSA	0.45	1.31	-0.86	0.86
Little Rock-North Little Rock, AR MSA	-0.01	0.01	-0.02	0.02
Longview-Marshall, TX MSA	-0.68	-0.59	-0.09	0.09
Los Angeles--Riverside--Orange County, CA CMSA	-0.42	0.27	-0.69	0.69
Louisville, KY-IN MSA	-0.9	0.45	-1.35	1.35
Lubbock, TX MSA	-0.39	-0.46	0.07	0.07
Lynchburg, VA MSA	-0.27	0.2	-0.47	0.47
Macon, GA MSA	-1.21	0.26	-1.47	1.47
Madison, WI MSA	0.75	1.13	-0.38	0.38

<i>MSA AREA</i>	<i>1990 std. cc socio- economic index</i>	<i>1990 std. sb socio- economic index</i>	<i>std. cc -sb index in 1990</i>	<i>Absolute value of metropolitan dissimilarity index</i>
Mansfield, OH MSA	-0.93	-0.05	-0.88	0.88
McAllen-Edinburg-Mission, TX MSA	-1.53	-2.87	1.34	1.34
Medford-Ashland, OR MSA	-0.18	-0.33	0.15	0.15
Melbourne-Titusville-Palm Bay, FL MSA	-0.02	0.62	-0.64	0.64
Memphis, TN-AR-MS MSA	-0.79	0.69	-1.48	1.48
Merced, CA MSA	-1.15	-1	-0.15	0.15
Miami--Fort Lauderdale, FL CMSA	-2.16	-0.06	-2.1	2.1
Milwaukee-Racine, WI CMSA	-1.01	1.42	-2.43	2.43
Minneapolis-St. Paul, MN-WI MSA	-0.05	1.31	-1.36	1.36
Missoula, MT MSA	-0.4	0.01	-0.41	0.41
Mobile, AL MSA	-0.66	-0.73	0.07	0.07
Modesto, CA MSA	-0.36	-0.84	0.48	0.48
Monroe, LA MSA	-1.59	-0.36	-1.23	1.23
Montgomery, AL MSA	-0.21	-0.05	-0.16	0.16
Muncie, IN MSA	-1.16	0.62	-1.78	1.78
Myrtle Beach, SC MSA	-0.64	-0.94	0.3	0.3
Naples, FL MSA	2.2	-0.17	2.37	2.37
Nashville, TN MSA	-0.02	0.61	-0.63	0.63
New London-Norwich, CT-RI MSA	-0.62	0.83	-1.45	1.45
New Orleans, LA MSA	-1.56	-0.24	-1.32	1.32
New York--Northern New Jersey--Long Island, NY--NJ-- -CT--PA CMSA	-0.68	1.85	-2.53	2.53
Norfolk-Virginia Beach-Newport News, VA-NC MSA	-0.07	0.63	-0.7	0.7
Ocala, FL MSA	-0.7	-0.54	-0.16	0.16
Odessa-Midland, TX MSA	-0.27	-0.85	0.58	0.58
Oklahoma City, OK MSA	-0.29	0.07	-0.36	0.36
Omaha, NE-IA MSA	0.1	1.03	-0.93	0.93
Orlando, FL MSA	-0.4	0.27	-0.67	0.67
Owensboro, KY MSA	-0.73	0.23	-0.96	0.96
Panama City, FL MSA	-0.77	-0.66	-0.11	0.11
Parkersburg-Marietta, WV-OH MSA	-0.72	0.05	-0.77	0.77
Pensacola, FL MSA	0.02	-0.36	0.38	0.38
Peoria-Pekin, IL MSA	-0.21	0.5	-0.71	0.71
Philadelphia--Wilmington--Atlantic City, PA--NJ--DE-- MD CMSA	-0.9	1.43	-2.33	2.33
Phoenix-Mesa, AZ MSA	0.01	-0.07	0.08	0.08
Pine Bluff, AR MSA	-1.34	-0.43	-0.91	0.91
Pittsburgh, PA MSA	-0.81	0.27	-1.08	1.08
Pittsfield, MA MSA	0.07	0.52	-0.45	0.45
Pocatello, ID MSA	-0.16	0.06	-0.22	0.22
Portland, ME MSA	-0.18	0.85	-1.03	1.03
Portland-Vancouver, OR-WA PMSA	-0.08	0.71	-0.79	0.79

<i>MSA AREA</i>	<i>1990 std. cc socio-economic index</i>	<i>1990 std. sb socio-economic index</i>	<i>std. cc -sb index in 1990</i>	<i>Absolute value of metropolitan dissimilarity index</i>
Providence-Fall River-Warwick, RI-MA MSA	-0.79	0.67	-1.46	1.46
Provo-Orem, UT MSA	-0.11	0.29	-0.4	0.4
Pueblo, CO MSA	-0.9	-0.23	-0.67	0.67
Punta Gorda, FL MSA	0.88	-0.19	1.07	1.07
Raleigh-Durham-Chapel Hill, NC MSA	0.68	0.96	-0.28	0.28
Rapid City, SD MSA	-0.05	-0.37	0.32	0.32
Reading, PA MSA	-1.25	0.94	-2.19	2.19
Redding, CA MSA	-0.44	-0.53	0.09	0.09
Reno, NV MSA	-0.12	0.4	-0.52	0.52
Richland-Kennewick-Pasco, WA MSA	-0.07	0.41	-0.48	0.48
Richmond-Petersburg, VA MSA	-0.66	1.15	-1.81	1.81
Roanoke, VA MSA	-0.54	1.07	-1.61	1.61
Rochester, MN MSA	1.34	1.47	-0.13	0.13
Rochester, NY MSA	-1.06	1.09	-2.15	2.15
Rockford, IL MSA	-0.1	0.52	-0.62	0.62
Rocky Mount, NC MSA	-0.57	-0.5	-0.07	0.07
Sacramento, CA PMSA	-0.19	0.46	-0.65	0.65
Saginaw-Bay City-Midland, MI MSA	-0.88	0.15	-1.03	1.03
St. Cloud, MN MSA	-0.31	0.18	-0.49	0.49
St. Joseph, MO MSA	-0.79	0.08	-0.87	0.87
St. Louis, MO-IL MSA	-1.36	0.85	-2.21	2.21
Salinas, CA MSA	-0.57	0.13	-0.7	0.7
Salt Lake City-Ogden, UT MSA	-0.32	0.63	-0.95	0.95
San Angelo, TX MSA	-0.74	0.23	-0.97	0.97
San Antonio, TX MSA	-0.85	0.4	-1.25	1.25
San Diego, CA MSA	0.37	0.44	-0.07	0.07
San Francisco--Oakland--San Jose, CA CMSA	0.34	1.72	-1.38	1.38
San Luis Obispo-Atascadero-Paso Robles, CA MSA	-0.08	0.26	-0.34	0.34
Santa Barbara-Santa Maria-Lompoc, CA MSA	-0.1	1.04	-1.14	1.14
Santa Fe, NM MSA	0.79	1.42	-0.63	0.63
Sarasota-Bradenton, FL MSA	-0.3	0.35	-0.65	0.65
Savannah, GA MSA	-1.09	0.41	-1.5	1.5
Scranton--Wilkes-Barre--Hazleton, PA MSA	-0.86	-0.08	-0.78	0.78
Seattle-Bellevue-Everett, WA PMSA	0.78	1.07	-0.29	0.29
Sharon, PA MSA	-0.99	-0.13	-0.86	0.86
Sheboygan, WI MSA	-0.18	0.71	-0.89	0.89
Sherman-Denison, TX MSA	-0.62	-0.29	-0.33	0.33
Shreveport-Bossier City, LA MSA	-1.02	-0.79	-0.23	0.23
Sioux City, IA-NE MSA	-0.13	-0.01	-0.12	0.12
Sioux Falls, SD MSA	0.39	0.68	-0.29	0.29
South Bend, IN MSA	-0.33	0.74	-1.07	1.07
Spokane, WA MSA	-0.47	0.34	-0.81	0.81
Springfield, IL MSA	0.35	0.91	-0.56	0.56

<i>MSA AREA</i>	<i>1990 std. cc socio- economic index</i>	<i>1990 std. sb socio- economic index</i>	<i>std. cc -sb index in 1990</i>	<i>Absolute value of metropolitan dissimilarity index</i>
Springfield, MO MSA	-0.54	0.3	-0.84	0.84
Springfield, MA MSA	-0.66	0.7	-1.36	1.36
State College, PA MSA	-0.78	0.53	-1.31	1.31
Steubenville-Weirton, OH-WV MSA	-0.73	-0.54	-0.19	0.19
Stockton-Lodi, CA MSA	-0.87	-0.15	-0.72	0.72
Sumter, SC MSA	-0.72	-0.73	0.01	0.01
Syracuse, NY MSA	-0.99	0.69	-1.68	1.68
Tallahassee, FL MSA	0.03	0.6	-0.57	0.57
Tampa-St. Petersburg-Clearwater, FL MSA	-0.36	0.12	-0.48	0.48
Terre Haute, IN MSA	-0.81	-0.03	-0.78	0.78
Texarkana, TX-Texarkana, AR MSA	-1.05	-0.3	-0.75	0.75
Toledo, OH MSA	-0.81	0.88	-1.69	1.69
Topeka, KS MSA	0.09	1.57	-1.48	1.48
Tucson, AZ MSA	-0.83	0.59	-1.42	1.42
Tulsa, OK MSA	-0.06	0.06	-0.12	0.12
Tuscaloosa, AL MSA	-0.68	-0.05	-0.63	0.63
Tyler, TX MSA	-0.56	-0.04	-0.52	0.52
Utica-Rome, NY MSA	-0.95	0.13	-1.08	1.08
Victoria, TX MSA	-0.58	-0.15	-0.43	0.43
Visalia-Tulare-Porterville, CA MSA	-0.61	-1.6	0.99	0.99
Waco, TX MSA	-1.49	0.21	-1.7	1.7
Waterbury, CT PMSA	-0.53	1.42	-1.95	1.95
Waterloo-Cedar Falls, IA MSA	-0.25	0.22	-0.47	0.47
Wausau, WI MSA	0.12	0.51	-0.39	0.39
West Palm Beach-Boca Raton, FL MSA	0.5	0.46	0.04	0.04
Wheeling, WV-OH MSA	-0.46	-0.69	0.23	0.23
Wichita, KS MSA	0.05	0.75	-0.7	0.7
Wichita Falls, TX MSA	-0.55	-0.25	-0.3	0.3
Williamsport, PA MSA	-1.37	-0.03	-1.34	1.34
Wilmington, NC MSA	-0.79	-0.36	-0.43	0.43
Yakima, WA MSA	-1.12	-0.76	-0.36	0.36
York, PA MSA	-1.43	0.75	-2.18	2.18
Youngstown-Warren, OH MSA	-1.76	-0.02	-1.74	1.74
Yuba City, CA MSA	-1.07	-0.82	-0.25	0.25
Yuma, AZ MSA	-0.62	-2.14	1.52	1.52

APPENDIX E

JOINT VENTURE WITH OTHER LOCAL GOVERNMENT TO ENCOURAGE ECONOMIC DEVELOPMENT (*POP CITY is OVER 50K*)

<i>City name</i>	<i>State</i>	<i>Interlocal Joint Venture</i>	<i>Member of Regional Organization for ED</i>
Dothan city	AL	1	1
Hoover city	AL	0	1
Huntsville city	AL	0	0
Montgomery city	AL	0	1
Flagstaff city	AZ	0	1
Mesa city	AZ	1	1
Tempe city	AZ	1	1
Little Rock city	AR	1	1
North Little Rock city	AR	1	1
Fort Smith city	AR	1	1
Fayetteville city	AR	0	0
Fremont city	CA	0	1
Hayward city	CA	0	1
Livermore city	CA	0	1
Pleasanton city	CA	0	1
San Leandro city	CA	1	1
Antioch city	CA	0	0
Concord city	CA	0	1
Bakersfield city	CA	0	1
Burbank city	CA	1	1
Cerritos city	CA	0	0
Gardena city	CA	1	1
Glendale city	CA	1	1
Lakewood city	CA	0	0
Long Beach city	CA	0	1
Pasadena city	CA	0	1
Santa Monica city	CA	0	0
Torrance city	CA	0	1
West Covina city	CA	0	1
West Covina city	CA	0	1
Whittier city	CA	0	0
Pico Rivera city	CA	1	1
Lancaster city	CA	0	1
Palmdale city	CA	0	1
Merced city	CA	1	1
Salinas city	CA	1	1
Brea city	CA	1	1

<i>City name</i>	<i>State</i>	<i>Interlocal Joint Venture</i>	<i>Member of Regional Organization for ED</i>
Buena Park city	CA	0	1
Costa Mesa city	CA	0	0
Fullerton city	CA	0	0
Huntington Beach city	CA	0	1
San Clemente city	CA	0	0
Santa Ana city	CA	0	1
Irvine city	CA	0	0
Corona city	CA	0	1
Palm Springs city	CA	0	1
Riverside city	CA	0	1
Temecula city	CA	0	1
Sacramento city	CA	0	1
Chino city	CA	0	1
Chino Hills city	CA	0	0
Fontana city	CA	0	1
Ontario city	CA	0	1
Rialto city	CA	0	1
San Bernardino city	CA	0	1
Rancho Cucamonga city	CA	0	1
Escondido city	CA	1	1
San Diego city	CA	1	1
Vista city	CA	0	1
Stockton city	CA	0	1
Daly City city	CA	0	1
San Mateo city	CA	0	1
South San Francisco city	CA	0	1
Milpitas city	CA	0	0
Palo Alto city	CA	0	1
Redding city	CA	1	1
Vacaville city	CA	1	1
Petaluma city	CA	0	1
Modesto city	CA	1	1
Oxnard city	CA	0	0
Thousand Oaks city	CA	0	1
Simi Valley city	CA	0	1
Davis city	CA	0	0
Westminster city	CO	1	1
Denver city	CO	1	1
Aurora city	CO	0	1
Boulder city	CO	0	0
Colorado Springs city	CO	0	0
Arvada city	CO	1	1
Lakewood city	CO	1	1
Bristol city	CT	0	1
Meriden city	CT	0	1

<i>City name</i>	<i>State</i>	<i>Interlocal Joint Venture</i>	<i>Member of Regional Organization for ED</i>
Milford city (balance)	CT	0	1
Washington city	DC	0	1
Gainesville city	FL	1	0
Hollywood city	FL	1	1
Oakland Park city	FL	0	1
Plantation city	FL	1	1
Davie town	FL	0	0
Coral Springs city	FL	0	1
Miami city	FL	1	1
North Miami city	FL	1	0
Pensacola city	FL	0	1
Tampa city	FL	0	1
Temple Terrace city	FL	0	1
Tallahassee city	FL	0	1
Delray Beach city	FL	0	0
Pinellas Park city	FL	0	1
Lakeland city	FL	0	1
Port St. Lucie city	FL	0	1
Sarasota city	FL	1	1
Daytona Beach city	FL	0	1
Athens-Clarke County (balance)	GA	0	1
Pocatello city	ID	1	1
Evanston city	IL	1	1
Schaumburg village	IL	1	1
Downers Grove village	IL	0	0
Naperville city	IL	0	0
Decatur city	IL	1	1
Springfield city	IL	1	1
Joliet city	IL	1	1
Hammond city	IN	1	0
Waterloo city	IA	1	1
Iowa City city	IA	0	1
Davenport city	IA	0	1
Sioux City city	IA	0	1
Overland Park city	KS	0	1
Wichita city	KS	1	1
Louisville city	KY	0	1
Bossier City city	LA	1	1
Shreveport city	LA	0	1
New Orleans city	LA	0	0
Attleboro city	MA	1	1
Peabody city	MA	0	0
Springfield city	MA	1	1
Malden city	MA	1	0
Somerville city	MA	0	1

<i>City name</i>	<i>State</i>	<i>Interlocal Joint Venture</i>	<i>Member of Regional Organization for ED</i>
Quincy city	MA	0	1
Brockton city	MA	0	1
Chelsea city	MA	1	1
Revere city	MA	1	1
Fitchburg city	MA	0	0
Leominster city	MA	1	1
Watertown city	MA	0	1
St. Clair Shores city	MI	0	0
Sterling Heights city	MI	0	0
Southfield city	MI	0	0
Farmington Hills city	MI	0	0
Dearborn city	MI	1	1
Livonia city	MI	0	1
Dearborn Heights city	MI	0	0
Taylor city	MI	1	1
Burnsville city	MN	1	0
Eagan city	MN	1	1
Minnetonka city	MN	0	0
Plymouth city	MN	0	0
St. Paul city	MN	0	1
St. Cloud city	MN	1	1
Gulfport city	MS	0	1
Independence city	MO	0	1
Kansas City city	MO	0	1
St. Louis city	MO	0	1
Great Falls city	MT	0	1
Billings city	MT	0	1
Lincoln city	NE	0	1
Henderson city	NV	1	1
Sparks city	NV	0	1
Concord city	NH	0	1
Vineland city	NJ	0	1
Trenton city	NJ	0	1
Passaic city	NJ	0	0
Paterson city	NJ	1	1
Syracuse city	NY	1	1
Greensboro city	NC	0	1
Charlotte city	NC	0	1
Jacksonville city	NC	0	1
Greenville city	NC	0	1
Cary town	NC	1	1
Bismarck city	ND	1	1
Parma city	OH	0	0
Mentor city	OH	0	1
Lorain city	OH	1	1

<i>City name</i>	<i>State</i>	<i>Interlocal Joint Venture</i>	<i>Member of Regional Organization for ED</i>
Youngstown city	OH	1	1
Dayton city	OH	1	1
Kettering city	OH	0	1
Stow city	OH	1	1
Norman city	OK	0	1
Midwest City city	OK	0	0
Oklahoma City city	OK	0	1
Broken Arrow city	OK	0	0
Medford city	OR	0	1
Eugene city	OR	0	1
Salem city	OR	0	1
Gresham city	OR	0	1
Hillsboro city	OR	1	1
Lancaster city	PA	1	1
Warwick city	RI	0	1
Greenville city	SC	0	1
Columbia city	SC	0	1
Sioux Falls city	SD	0	1
Killeen city	TX	1	1
Bryan city	TX	0	1
Denton city	TX	0	0
Lewisville city	TX	0	1
Galveston city	TX	0	0
Baytown city	TX	0	1
Beaumont city	TX	1	1
Lubbock city	TX	0	1
Waco city	TX	0	1
Tyler city	TX	1	1
Arlington city	TX	0	0
North Richland Hills city	TX	1	1
Abilene city	TX	1	1
Austin city	TX	0	0
Laredo city	TX	0	1
Wichita Falls city	TX	0	1
Layton city	UT	0	0
Murray city	UT	0	1
Salt Lake City city	UT	0	1
Sandy city	UT	0	1
West Jordan city	UT	1	1
Ogden city	UT	0	1
Newport News city	VA	0	1
Portsmouth city	VA	0	1
Bellevue city	WA	1	1
Tacoma city	WA	1	1
Green Bay city	WI	0	1

<i>City name</i>	<i>State</i>	<i>Interlocal Joint Venture</i>	<i>Member of Regional Organization for ED</i>
Wauwatosa city	WI	0	1
West Allis city	WI	0	1
Janesville city	WI	1	0
Menomonee Falls village	WI	0	0
New Berlin city	WI	0	0

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BIOGRAPHICAL SKETCH

Education

- Ph. D in Askew School of Public Administration and Public Policy, Florida State University., FL, U.S.A., Fall 2005.
- M.A. in Public Administration, Yonsei University, Seoul, Korea., May 2001
- B.A. in Public Administration, Yonsei University, Seoul, Korea., May 1998

Teaching and Research Interest

- Local Governance, Public Policy, Institution and Society (Governance), Public Choice, Program Evaluation & Analytical Techniques, Methodology, Game Theory and Social Network Analysis.

Professional Work and Research Experience

- Research Assistant: Fall 2001- Present, Program in Local Governance, Devoe Moore Center for the study of Economic Policy and Government.
- Research Assistant and Web Developer: Summer 2003-Present: Working Group of Water Governance Center in Florida State University
- Webpage Developer and Administrator: May 2004-Aug 2005., The Association of Korean Political Studies
- Homepage and Database administrating: Aug 2000- July 2001 Department of Public Administration, Yonsei University

Publication

- Hyung Jun Park and Richard Feiock., 2002, Social Capital and The Tradeoff Between Environment and Development. *International Journal of Economic Development* 4(3&4)
- Hyung Jun Park, 2001, *An Intervention Time-Series Analysis of the Administrative Reform in Korea Since 1980*. M.A. Dissertation, Department of Public Administration, Yonsei University, Seoul, Korea

Honors and Grant

- Ph. D. Dissertation Fellowship, 2005-2006, DeVoe L. Moore Center, Florida State University.
- 2005, 66th American Society and Public Administration (ASPA) Paper Presentation
Travel Grant
- University Fellowship 2004-2005, Florida State University
- University Fellowship 2003-2004, Florida State University
- University Fellowship 2002-2003, Florida State University
- Social Science Teaching Fellowship 2001-2002, Florida State University
- Scholarship for distinguished undergraduate students, 1997, Yonsei University, Seoul, Korea
- Scholarship for distinguished undergraduate students, 1996, Yonsei University, Seoul, Korea
- Scholarship for distinguished undergraduate students, 1995, Yonsei University, Seoul, Korea