INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

UMI®
RICE UNIVERSITY

Cities and Their Suburbs: "Go Along to Get Along"

by

Stephanie Lee Shirley Post

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE

Doctor of Philosophy

APPROVED, THESIS COMMITTEE

Robert M. Stein, Professor
Political Science

Keith E. Hamm, Professor
Political Science

Paul Brace, Professor
Political Science

Peter Mieszkowski, Professor
Economics

HOUSTON, TEXAS

APRIL 2002
Abstract

Cities and Their Suburbs: “Go Along to Get Along”

by

Stephanie Lee Shirley Post

This dissertation examines the economic and policy relationships between center cities and their suburbs. It makes several contributions to the existing urban literature.

First, this dissertation confirms previous research finding that center cities and their suburbs are economically linked. It confirms that the economic link exists over time (1970 to 1990) and that it endures even after controlling for the impact of the state economy.

Second, it confirms the traditional expectation that metropolitan area government structure influences the direction of center city/suburb income disparity - but not in the way predicted by previous literature. Using an alternative conceptualization of local government fragmentation - the total number of local governments per square mile - it finds that the geographic density of local governments within a metropolitan area influences center city/suburb income disparities. The analysis suggests that geographic density of metropolitan area governments should be considered when examining the influence of fragmentation on local government policy decisions.

Third, this dissertation finds mixed evidence regarding the impact of center city/suburb income disparity on metropolitan area economic health. Traditionally, it is thought that the center city is the regional economic engine, and that increasing income disparity favoring the suburbs undermines metropolitan area growth. Although this theory held true during the 1970s, the data unexpectedly reveals an opposite conclusion in the 1980s: increasing income disparity in favor of the suburbs was related to increasing
metropolitan area economic health. If this finding proves stable using the 2000 Census data, it may signal a change in the nature of the metropolitan area economy that would be significant for future policy development.

Finally, this dissertation examines the relationship between fragmentation and the incidence of local intergovernmental agreements. It finds that fragmented local governments can cooperate in the provision of certain goods and services. This cooperation is especially likely among geographically dense local governments providing capital-intensive goods and services that generate economies of scale. This finding reinforces the importance of density in future urban research and signals an opportunity to pursue new cooperative solutions that could achieve many of the benefits of consolidated government while preserving existing local governments.
Acknowledgements

There are many people who made significant contributions to this dissertation.
To each I send a heartfelt thank you.

My advisor, Robert Stein, patiently spent endless hours teaching me to be a political scientist. Over the years, he encouraged, challenged, and supported me somehow knowing when each was appropriate. Thank you for being an excellent mentor and a good friend.

Many thanks to Keith Hamm, John Alford, Peter Mieszkowski, and Paul Brace, who provided generous support and suggestions that helped to shape the final product.

I am grateful to Kevin Arceneaux, Regina Branton, Sean Bolks, Richard N. Engstrom, Martin Johnson, and Laura Langer, who were never too busy to discuss my research. I am also grateful to the Department of Housing and Urban Development, who generously provided financial support for this project.

Thank you to my parents, Steve and Wanda Shirley and Stanley and Antoinette Post, and to my grandparents, Orvil and Florine Shirley. Collectively, they were an amazing source of strength and support when I needed it most.

This project never would have come to completion without the enduring love and support of my husband, Russell Post. Russell spent countless hours discussing my research, always providing new insights and helpful suggestions. He willingly edited the entire manuscript, while practicing law full time and taking care of our daughter. His steady support and encouragement enabled me to finish the dissertation. I am truly blessed to be able to share my life with my best friend.
Last but not least, this project is dedicated to my daughter, Hatley Post. She entered my life on December 13, 2000 and has been my inspiration ever since.

I appreciate the contributions of each of these individuals, but any mistakes are entirely my own.
Table of Contents

Introduction .............................................................................................................. 1

Chapter 1
Center City and Suburban Economic and Policy Ties .............................. 8

Chapter 2
Local Intergovernmental Cooperation: Institutional Collective Action......... 36

Chapter 3
Economic Ties: The Center City/Suburb Economic Relationship ............ 55

Chapter 4
Center City/Suburb Economic Disparity and Regional Economic Growth.... 81

Chapter 5
Local Intergovernmental Cooperation ................................................................. 119

Chapter 6
Conclusion ........................................................................................................... 146

Bibliography ......................................................................................................... 159

Appendix A .......................................................................................................... 166

Appendix B .......................................................................................................... 168

Appendix C-1 ..................................................................................................... 174

Appendix C-2 ..................................................................................................... 175

Appendix D-1 ..................................................................................................... 176

Appendix D-2 ..................................................................................................... 177
Introduction

The American dream of affordable single-family homes has been realized through creation and expansion of the suburb. After World War II, millions of city residents left for the suburbs. While they and their children continued working in the center city, few returned to reside there. People exchanged the location convenience of the center city for affordable housing, low taxes, and different quantities and qualities of government services (Miller 1981). This exodus forever altered the relationship between center cities and their suburbs, forcing the two areas to cooperate and compete over the acquisition and retention of productive capital and labor.

In many cases, the center city lost this battle. Over the past 20 years, suburban per capita income has surpassed center city per capita income in a majority of metropolitan areas. In 1970, 58% of metropolitan areas with populations over 250,000 had center cities whose per capita income exceeded that of their suburbs. By 1990, that number had fallen to 33%.\(^1\) Today, center cities are faced with problems of declining tax bases and increasing demands on city services from poor residents. In some metropolitan areas, the economic decline is so great that the center city is viewed as an economic albatross around the neck of its suburbs. Rusk (1993) identifies a dozen cities that have passed the economic “point of no return”\(^2\). He argues that when center city income is

---

\(^1\) These numbers are based on 152 metropolitan statistical areas as defined by the Census in June 1999. This sample of MSAs excludes the New England states and several additional MSAs where center city information was not available across time.

\(^2\) Rusk’s inelastic cities pass the “point of no return” because as the population declines the city-suburb income gap widens. These cities include: Chicago, IL; New Haven, CT; Philadelphia, PA; Gary, IN; Detroit, MI; Baltimore, MD; Cleveland, OH; Trenton, N.J.; Hartford, CT; Paterson, N.J.; Bridgeport, CT; and Newark, N.J. (see Rusk 1993, Table 2.20 page 77).
only 70% of suburban income, the "city-suburb economic disparities become so severe
that the city, in a broad sense, no longer is a place to invest or create jobs (except in some
fortress-type downtowns)" (Rusk 1993: 75-76).

To combat declining revenues, many center cities are pursuing economic
development programs targeted at economically and culturally reviving their downtown
areas. These programs often involve the construction of new sports and entertainment
venues, as well as improved options for center city housing. Politicians, bureaucrats, and
developers now realize that constructing new entertainment venues in old downtown
areas only leads to temporary economic growth unless individuals are encouraged to
reside in the center city. Long-term urban renewal hinges on people moving back into
the center city. Houston, Texas recognized the importance of the entertainment and
residential combination when it began its downtown revitalization project. Houston has
constructed a new downtown baseball park and is in the process of constructing a new
theater and basketball arena. In addition, the city provided tax incentives to developers
for the creation of additional entertainment venues and restaurants. Finally, the city
provided incentives to create more attractive residential alternatives downtown. The Rice
Hotel and other decaying buildings have been completely renovated into urban lofts.
Houston’s efforts mirror those of other cities across the country.

One reason so much recent effort has been devoted to downtown revitalization is
that improvements in the economic health of the center city are thought to generate
spillover benefits for the surrounding areas. This is best evidenced by the fact that many
downtown revitalization projects are paid for, in part, by suburban residents. For
example, Houston’s Enron Field was funded with county revenues. Both city and
suburban residents paid for construction of the field, because both were expected to benefit from its use. Many county residents, however, were skeptical that they would derive significant benefits from a new downtown ballpark. The lack of county support for downtown sports facilities was apparent when county residents initially voted against the construction of a new downtown basketball arena, even though the project's funding was already in place and would impose no new taxes on county residents. It took another year of negotiations between city and county officials before all agreed on a plan they could support. As these examples illustrate, center cities and their suburbs often recognize that cooperation is in their mutual interest, but this realization does not eliminate the underlying competition between the two.

This competition should only increase as the number of new suburban areas increases. The average number of general purpose governments in a metropolitan statistical area has increased from 22.9 governments in 1962 to 24.8 governments in 1992. Much of this increase may be due to suburban sprawl. Almost two million acres of undeveloped land is devoted to new housing developments each year. Furthermore, the amount of land being developed and incorporated into metropolitan areas is rising faster than the population levels in those metropolitan areas. In 1950, 70 million Americans lived in the nation's urbanized areas and these regions covered some 13,000 square miles. "By 1990 the urban-suburban population had more than doubled, yet the area occupied by that population almost quintupled – to more than 60,000 square miles" (Mitchell 2001: 55). The costs of this dramatic suburban growth include lost farmland, increased pollution, and increased traffic congestion.

---

The costs of suburban sprawl have not gone unnoticed. They have influenced local, state, and national political agendas. Communities such as Portland, Oregon have adopted policies aimed at limiting and regulating the development of new land, while encouraging higher-density growth in previously developed areas. The goal of these policies is to curtail sprawl, while promoting the economic health of a metropolitan area. In most cases, these policies require some level of cooperation between the center city and suburban governments. Recent works by Rusk (1999) and Dreier, Mollenkopf, and Swanstrom (2001) argue that federal initiatives are necessary to curtail suburban sprawl effectively and promote urban renewal. These scholars argue that the magnitude of the social and economic problems facing declining center cities justifies federal intervention. They claim that the federal government is the most effective level of government to promote local government cooperation and regional solutions. Orfield (1997) argues that the state legislature is an effective arena to solve many metropolitan area problems. He demonstrates that it is possible to build urban/suburban coalitions within the state legislature.

Previous research finds a strong economic link between center cities and their suburbs (Barnes and Ledebur 1998, Savitch et al. 1992, and Post and Stein 2001). This finding has led to the conclusion that some form of regional cooperation is in the best interest of all governments in the area (Barnes and Ledebur 1998). Many believe that the most effective way to promote local government cooperation is through less government. The literature on center city/suburban relations over the last decade argues that consolidated metropolitan area government (smaller number of general purpose local governments) is preferable to fragmented metropolitan area government (larger number
of general purpose local governments). Minimizing the number of local governments minimizes the opportunities for the metropolitan area population to sort themselves racially and economically, decreasing the likelihood that the center city will be residentially abandoned by the wealthy. Consequently, the income disparity between center cities and their suburbs should be lower in metropolitan areas with consolidated local government. Low income disparities between center cities and their suburbs are thought to signal a strong metropolitan area economy.

Surprisingly little research exists, however, that directly tests either the relationship between metropolitan area government structure (i.e. fragmented versus consolidated) and center city/suburban income disparity or the relationship between income disparity and overall metropolitan area economic growth. Several studies have examined the impact of metropolitan area income disparity on overall metropolitan area economic growth, but most of them are limited to a single metropolitan area, or they fail to distinguish between the center city and its suburbs adequately. Furthermore, all of them fail to consider the impact of the structure of metropolitan area government (i.e. consolidated versus fragmented) on urban/suburban income disparity and overall metropolitan area economic growth.

This omission in the literature is significant, as many of the recent policy recommendations for reducing center city/suburban income disparity and promoting metropolitan area economic health focus on altering existing political boundaries or imposing a new level of regional government (Rusk 1993, Downs 1994). For example, Rusk (1993) argues that expanding the geographic boundaries of the center city is the most effective way for the center city to expand its tax base and continue to act as the
economic engine for the entire metropolitan area. In his opinion, it is possible to
redistribute wealth simply by altering political boundaries. But because there are high
costs to annexation, consolidation, and new government formation, we should confirm
whether these assumed relationships exist before we engage in a massive restructuring of
local government.

It is evident that some form of local government cooperation is in the economic
and social interest of the center city and its suburbs. It is possible, however, that existing
local governments could cooperate without imposing new regional governments or
aggressive consolidation efforts. Local intergovernmental cooperation may have a
positive impact on metropolitan area economic health and service disparities across the
entire metropolitan area. The challenge is to identify the factors that encourage local
government cooperation.

This dissertation addresses four broad questions. First, are center cities and their
suburbs economically linked? Second, does metropolitan area government structure
influence center city/suburb income disparities? Third, does center city/suburb income
disparity have a negative impact on metropolitan area economic health? Finally, is it
possible for fragmented local governments to cooperate in the provision of goods and
services? If so, what factors influence this cooperation? Each of these questions is
addressed in the following chapters.

Legendary Speaker of the House Sam Rayburn used to greet new members of the
House of Representatives with this maxim about success in the political arena: "If you
want to get along in the House, go along." This common-sense rule has been applied to a
variety of contexts, including the urban political arena (Stone 1989). But like most
common-sense rules applied to politics, it is often easier said than done. This dissertation examines the circumstances under which local governments can find ways to “go along” with each other, maximizing their ability to provide goods and services to their constituents and “get along” with the other governments in a metropolitan area.

Chapter 1

Center City and Suburban Economic and Policy Ties

U.S. suburban governments were first established at the turn of the twentieth century. Over the past one hundred years, the number of suburban governments has proliferated. In the latter part of the twentieth century, many center cities have experienced significant economic decline relative to their suburban counterparts. This situation has caused many researchers to examine the economic and policy relationships between center cities and their suburbs. Several important questions drive this research: Are center cities and their suburbs economically tied? If so how does this economic relationship influence overall metropolitan area economic health? Is it possible for the metropolitan area to thrive economically if the center city is languishing? Does center city/suburb policy cooperation promote metropolitan area economic health? If so, what factors promote local government cooperation?

This chapter examines previous research that addresses questions of center city/suburb economic ties and metropolitan area economic growth. It explains the economic relationship between center cities and their suburbs and how that economic relationship influences metropolitan area economic growth. Special attention is paid to the role the structure of metropolitan area government (i.e. a large number fragmented of general purpose governments versus a small number of consolidated general purposed governments) plays in this economic relationship. Understanding the relationship between the structure of metropolitan area government and regional economic health is important, because many recent policy recommendations are based on the assumption that center city/suburb economic disparity is lower in consolidated metropolitan areas and
that low levels of income disparity signal an economically healthy metropolitan area. Surprisingly, the literature lacks a direct empirical test of this series of relationships between metropolitan area government structure, center city/suburb income disparity, and metropolitan area economic growth. This omission in the literature is significant, because recent work advocates altering existing structures of local government as the best way to encourage regional economic growth.

Are Cities and Their Suburbs Economically Linked?

The first step in evaluating center city/suburb economic relations is to determine if the two areas are economically linked. Establishing an economic tie between the two areas provides a foundation for the rest of the analysis of center city/suburb economic relationships. A strong economic tie between the two areas also provides a strong incentive for local government cooperation. On the other hand, if center cities and their suburbs are not economically joined there is limited justification for further examination of the economic relationship between the two areas.

Previous research finds a strong economic link between center cities and their suburbs finds. It demonstrates that changes in center city per capita income are significantly and positively related to changes in suburban per capita income (Barnes and Ledebur 1998; Savitch et al. 1992; Voith 1992; 1993; Post and Stein 2000). This finding led Barnes and Ledebur (1998) and others to conclude that the economic well-being of center cities and their suburbs is intertwined; consequently, it is in the economic interest of both areas to cooperate. The scope and magnitude of this proposed cooperation varies from proposals for city-county consolidated government to policy-specific intergovernmental agreements.
Most of the research linking center cities and their suburbs economically is limited to one decade of analysis, 1980-1990. The lack of pre-1980 analysis is significant, because makes it difficult to determine whether this relationship is a recent phenomenon or if it extends through time. Many recent policy suggestions for promoting regional economic growth are based on the assumption that the city/suburb economic relationship is enduring. Specifically, recommendations to consolidate existing local governments to promote metropolitan area economic growth rest on the assumption that cities and their suburbs are economically linked. Before these suggestions are implemented a more comprehensive understanding of the center city/suburb economic bond is necessary.

Currently there are two dominant explanations of this relationship. The first is that it is impossible to be a suburb of nowhere. Center cities and suburban areas are economically and socially tied because suburban residents work and recreate in the center city while owning homes in the suburbs. The second is that both areas are part of the larger state economy and any economic relationship between the two is merely an artifact of this larger economy.

Residing in the Suburbs and Working in the Center City

The first explanation of the center city/suburb economic relationship is that suburban areas were developed in response to demand for residential areas outside of the center city. People were looking for the lifestyle benefits of a small town with the employment opportunities of a large city. In many cases suburban governments were expected to have separate governments with lower taxes and cheaper public services. Residents of these areas often own homes and pay property taxes to the suburban
government while working and recreating in the center city. These individuals move
effortlessly between multiple jurisdictions daily, paying little attention to formal political
geographic boundaries. This mobility allows suburban residents to use services such as
roads, police and fire protection provided by their residential government, and to free ride
on similar services provided by the center city government. This seamless movement
across local government boundaries is part of what economically links center cities to
their suburbs.

State Economy

The second explanation for the economic relationship between center cities and
their suburbs is that they are both part of the larger state, regional, and national economy.
Consequently, both areas experience similar economic cycles. Blair and Zhang (1994)
argue that the reported economic tie between center cities and their suburbs is merely an
artifact of the larger state economy. When they control for changes in the level of state
per capita income they find that the significant relationship between the change in center
city per capita income and the change in suburban per capita income dramatically
diminishes. If Blair and Zhang’s findings are correct, then the economic development
policy decisions of local governments are largely irrelevant and the need for cooperation
among local governments is dramatically diminished.

The state is not the only economic force at work in both center cities and their
suburbs. Brace (1993) demonstrates that the multi-state regional economy has a
significant impact on individual state economic health. He finds that state economic
well-being is often at the mercy of exogenous economic forces in the larger regional and
national economy. Consequently, states have limited control over their economic fates.
He concludes that the impact of state economic development policy is limited. States can influence income growth, but they have little impact on outcomes such as job creation.

Blair and Zhang's and Brace's analyses demonstrate that all state and local economic relationships are influenced by some larger economy. They do not, however, eliminate the possibility that each level of government retains some influence over its economic future. Bartolome and Spiegel (1997) and Mofidi and Stone (1990) find that state taxation and development policies, as well as state expenditures, influence manufacturing location decisions, thereby impacting state economic growth. Feiock (1991) extends this research to the local level. He confirms that state taxation and economic policies influence interstate business location decisions, but he also finds that local taxation and economic policies influence intrastate business location decisions. His findings demonstrate that local governments can shape their economic future within the context of the larger state economy.

Post and Stein's (2000) examination of center city/suburb economic ties also demonstrates that local governments have some control over their economic future. They find that the center cities and their suburbs share an economic bond that is not an artifact of the larger state economy. The state economy is an important but not exclusive explanation of this relationship. Post and Stein's findings differ from those of Blair and Zhang (1994) because they use a measure of change in state per capita income recommended by Hill, Wolman, and Ford (1995). Hill et al. (1995) argue that Blair and Zhang's (1994) effort to specify the economic relationship between cities and their suburbs is flawed. Using a state-level measure of economic development (i.e., change in per capita personal income) to explain changes in suburban and urban income may be
tautological because a significant portion of the state-level variable already includes changes in suburban and urban income levels. This is particularly true in states such as California, Florida, New York, and Texas which are dominated by large metropolitan areas. Hill et al. (1995) state that the measure of change in state per capita income should be purged of the “contribution from the metropolitan area in question” (Hill, Wolman, and Ford 1995, 161). The authors, however, fail to empirically test their measurement suggestions.

Post and Stein (2000) implement Hill, Wolman, and Ford’s measure of change in state per capita income and find that center cities and their suburbs are economically tied. Replicating Blair and Zhang’s analysis using the new measure of state economic health, they find that changes in center city per capita income are significantly and positively related to changes in suburban per capita income. This new control measure of the state economy reveals that the state economy has a significant - but not overwhelming - impact on the economic relationship between center cities and their suburbs. These two areas share an economic relationship that is not merely a byproduct of the state economy. This finding sets the stage for future research regarding the economic relationship between center cities and their suburbs. The absence of a dominant state influence on urban and suburban economies suggests that the policy decisions of local authorities are important. Furthermore, it is possible that these policy decisions will generate spill over costs and benefits to other local governments.

Before these findings are used as the basis of policy recommendations and future research, it is important to note that Post and Stein’s work (and all of the research their study is based on) is limited to one decade (1979-1989). This is significant because it is
possible that the urban/suburban relationship has changed over time. Barnes and Ledebur (1998) suggest that the relationship between center city and suburban economic conditions has grown stronger over time (i.e. between 1979 and 1989). They indicate that the interdependency of center cities and their suburbs may be a relatively recent phenomenon. A longer time series analysis would significantly contribute to our understanding of center city/suburb economic relationships.

**Does Economic Disparity Between Center Cities and Their Suburbs Impact Metropolitan Area Economic Health?**

Establishing an economic tie between center cities and their suburbs is only the first step in fully understanding the role this relationship plays in metropolitan area economic health. The next step is to determine if economic disparity between center cities and their suburbs adversely affects metropolitan area economic health and if the direction of that disparity is important. In other words, does it matter if the center city is economically weaker or stronger relative to its suburbs? Is it possible to have healthy suburbs and an economically distressed center city?

Since 1970, the ratio of center city to suburban per capita income has steadily declined. This increase in income disparity is thought to impact metropolitan area economic health adversely. Metropolitan area economic growth is predicted to be lower in areas with a larger income gap between center cities and their suburbs than in areas with a smaller income gap (Barnes and Ledebur 1998, Rusk 1993). Center city/suburb income disparity is also thought to predict service inequalities across metropolitan areas. Poor residents of economically struggling center cities are thought to receive inferior publicly provided goods and services relative to residents of their suburban counterparts (Hill 1974, Neiman 1976, Lowery 1998).
The dominant explanation for this predicted relationship is that a declining center city makes the entire metropolitan area unattractive to productive capital and labor. If center cities decline too far they may not be able to recover from the mass exodus of wealthy residents and businesses. Rusk (1993) argues that a center city has passed the “point of no return” when its per capita income is only 70% of suburban per capita income (Rusk 1993: 75). He argues that two factors intensify the magnitude of center city/suburb income disparity: inelastic demand for city labor and fragmentation of local government (i.e. a larger number of smaller local governments in a metropolitan area).

**Declining Center City as an Economic Albatross**

An economically weak center city is thought to generate negative externalities that spill over into the entire region. These negative externalities are often attributed to the large number of poor residents left behind in the center city. A large concentration of poor residents in the center city increases demand for redistributive goods and services such as welfare and health care. Peterson (1981) argues that it is not in the self interest of local governments to provide such services. He contends that local governments should provide goods and services aimed at attracting productive capital and labor, because these groups make low service demands on city government while increasing the city’s tax base. In contrast, redistributive policies attract poor residents who make significant demands on city resources, yet contribute little to the city’s tax base. If local governments divert too many resources from economic development policies to redistributive policies productive capital and labor leave the center city to avoid paying taxes for services from which they do not benefit. If the costs of concentrated poverty become too great productive capital and labor may choose to abandon not only the city
but the entire metropolitan area as well. Peterson argues that state and national
governments should be responsible for redistributive programs since it is more difficult
for productive capital and labor to cross state and national government borders than local
government borders.

One reason productive capital and labor may avoid the entire metropolitan area is
that high concentrations of poverty in the center city produce social pathologies in the
form of crime and health problems. The impact of these social pathologies may be felt in
the suburbs as well as the center city (Altshuler et al. 1999; Wilson 1987). Increasing
crime rates and health problems heighten demand for public services such as police
protection and health services. Lower education levels among center city residents also
impose economic costs on the metropolitan area. Holzer (1999) finds that economic
segregation can lead to a significant drop in high school graduation rates which in turn
leads to a decrease in earnings and higher job turnover rates. This loss of potential
economic productivity harms both the center city and its suburbs (Altshuler et al. 1999).
The social and economic costs of poverty can set into motion a downward economic
spiral from which it is hard to escape.

Inelastic Demand for Urban v. Suburban Labor

The lower education and skill level of city workers relative to those of suburban
workers contribute to lower demand for city workers. This lower demand for city labor
relative to suburban labor may cause the economic disparity between center cities and
their suburbs to actually widen rather narrow during times of economic prosperity. Hill
and Wolman (1997a) explain the economic disparity between center cities and suburbs as
a function of demand for labor. They test two competing hypotheses regarding the
relative demand for suburban and city labor. The first hypothesis assumes that demand for center city labor is elastic and that center city labor is a substitute for suburban workers - as demand for labor increases the demand for both center city and suburban workers increases. The second hypothesis argues that demand for center city labor is inelastic and that "central city labor is a poor substitute for suburban labor ... and tightening labor markets actually exacerbate suburban-central-city income disparities" (Hill and Wolman 1997a, 47). They find empirical support for the inelastic demand hypothesis and conclude that center city labor is not a substitute for suburban labor. This finding implies that periods of economic growth actually widen rather than narrow the economic gap between cities and their suburbs.

**Metropolitan Area Government Structure – Fragmentation v. Consolidation**

Differences in labor force qualifications are not the only factor thought to contribute to center city/suburb economic disparity. Metropolitan area government fragmentation is also thought to influence the economic relationship between center cities and their suburbs. Rusk (1993), Downs (1994), and Barnes and Ledebur (1998) argue that local governments in consolidated metropolitan areas are less likely to experience significant income disparities between center cities and their suburbs. This is because there are fewer metropolitan area local governments, which means there are fewer actors necessary to coordinate policy decisions and fewer opportunities for the local population to segregate themselves into homogenous communities. In contrast, fragmented metropolitan area government increases the number of actors necessary to coordinate policy decisions and it is thought to promote racial and economic segregation. As the number of general purpose governments within a metropolitan area increases, so does the
number of opportunities for residents to sort themselves based on preferences for tax and service bundles (Tiebout 1956) as well as preferences for economic and racial exclusion (Miller 1981; Burns 1984).

Proponents of fragmented metropolitan area government argue that local governments create a market for public goods and services. Tiebout (1956) finds the larger the number of local governments, the more they behave like market participants. Peterson (1981) argues that local governments compete with each to attract productive capital and labor. This competition is evidenced in the provision of a variety of tax/service bundles aimed at promoting economic growth. The motivation for this market-like behavior is the ability of productive capital and labor to "vote with their feet" and move between local governments. Relatively speaking, it is easier for businesses and individuals to move among local governments than it is for them to move among state or national governments. As the number of local governments within a metropolitan area increases, so do the gradations of tax/service bundles and the overall sorting of the resident population. This competition among local governments acts as a fiscal constraint on the overall size of local governments (Ostrom, Tiebout, and Warren 1961, Ostrom and Ostrom 1971, V. Ostrom 1974, Ostrom, Bish, and Ostrom 1988, and Parks and Oakerson 1989). Non-competition among local governments is thought to facilitate local bureaucrats' pursuit of larger budgets and an expanded public sector (Niskanen 1994, Brennan and Buchanan 1980).

Not everyone, however, thinks competition among local governments is beneficial. Proponents of consolidated local government argue that the costs of government fragmentation outweigh the benefits. They claim that externalities,
asymmetries of information, and a lack of economies of scale offset the efficiency gains of competition among numerous local governments. Consolidated local governments are better able to contain any external costs or benefits generated by publicly provided goods and services because their borders encompass a larger geography. Their large size also enables them to realize the benefits of economies of scale. Consolidated local governments minimize information asymmetries between government officials and constituents, as citizens are more likely to be aware of who governs them when there are fewer units of government. This streamlining is believed to provide more effective representation. Finally, consolidated metropolitan area government minimizes the ability of residents to sort themselves into homogenous groups, and makes it more difficult for productive capital and labor to vote with their feet and move among local jurisdictions.

The literature on local government formation provides some evidence of the relationship between residential population sorting and metropolitan area government fragmentation. Many new local governments are formed as a direct result of local residents' desire for economic and racial homogeneity. Miller (1981) argues that many of the Los Angeles bedroom communities established in the 1940s and the 1950s were formed to meet residents' demands for the lowest property taxes possible, regardless of service levels. He contends that these suburban communities were formed in response to citizens desire to maintain low property taxes while avoiding the high costs of redistributive services.

The primary motivation for Lakewood Plan cities was the creation of enclaves where taxpayers could escape from the redistributational pattern of old-line cities. If the new cities had sufficient resources apart from property taxation to supply an ample set of urban services, so much the better. If not, then incorporation with the promise of minimal services and no property taxation was preferable to annexation to an old-line city with
its bureaucracy and redistributional programs financed by a shared resource pool. . . . The Lakewood Plan cities were created and were operated as "minimal cities," not for reasons of efficiency, but as a way out for property owners who didn't want to pay for the municipal provision of private or redistributional services (Miller 1981: 77, 83).

These minimalist cities were incorporated in response to annexation threats by established cities. They were able to maintain low taxes by contracting with the county to provide basic services such as waste water treatment, police, and fire.

Burns (1994) expands on Miller's analysis, arguing that new local governments form in response to certain individuals desire to live in homogeneous communities. She argues that one of the reasons local governments form is that white citizens desire "...to build exclusionary walls against lower classes and African Americans" (1994: 109). She argues that white residents sought to prevent blacks from gaining access to political power by excluding them from newly formed governments. This preference for exclusion often drives the incorporation of new communities as well as the merger of existing communities.

The economic segregation of the population is thought to lead to service inequalities across local governments. Local governments with poorer residents have lower tax bases relative to their wealthier counterparts, which translate into lower quality goods and services. This premise is the basis of the social stratification-government inequality (SSGI) hypothesis, first examined by Hill (1974) and Neiman (1976). The SSGI hypothesis argues that fragmented local government leads to residential patterns that "systematically deprive minorities and the poor access to the resources needed to address fundamental social problems" (Lowery 1998:3).
There has been considerable debate regarding the empirical validity of the SSGI hypothesis. Ostrom (1983) provides a summary of the evidence refuting the hypothesis and Lowery (1998) responds to Ostrom and provides evidence supporting the hypothesis. Ostrom (1983) argues that the empirical evidence supporting the “eight essential components” of the SSGI thesis is mixed at best and nonexistent in some cases. She claims that while families of similar background may seek residence next to each other, that fact does not “foreclose the possibility that values other than race and wealth may be important to people in selecting a neighborhood” (Ostrom 1983: 95). She also notes that empirical research finds municipal boundaries and social boundaries do not always coincide, that fragmented municipalities do not automatically translate into inequality of fiscal resources, and that higher levels of public resources do not always translate into higher levels of service.

Lowery (1998) responds to Ostrom's (1983) critique of the SSGI hypothesis. He argues that recent research demonstrates that racial sorting is the dominant residential pattern in spite of the fact that individuals move to an area based on tax/service bundles (Teske et al. 1993, Lowery and Lyons 1989, Stein 1987, Dowding, John, and Biggs 1994). He contends that most of the empirical evidence regarding minority/majority residential location decisions supports the SSGI hypothesis. For example, Rusk (1993) finds that racial segregation is more severe in fragmented areas than in areas with “elastic borders”. This racial segregation results in poor blacks becoming more centralized in the center city. As a result the city’s fiscal base declines, leading to less spending on programs targeted at the poor. Likewise, Schneider (1989) finds that spending on redistributive policies is lower in areas with highly fragmented government. Lowery
concludes that cost of fragmented government are much high than any efficiency gains they might realize.

The debate summarized by Ostrom and Lowery demonstrates that fragmented and consolidated metropolitan area government structures are expected to generate distinct policy outcomes. The relative merits of those policy outcomes are at the heart of the fragmentation-consolidation debate. Many recent policy recommendations favor the economic and social equality outcomes expected from consolidated metropolitan area government. These recommendations invariably promise to promote center city and regional economic health by altering existing political boundaries (i.e. annexation, city/county consolidation, etc.), establishing new regional governments, or increasing center city/suburb cooperation. Each of these recommendations is examined in the following section.

Policy Recommendations for Metropolitan Area Economic Health

One dominant theme in recent literature on the economic and policy relationships between center cities and their suburbs is that some form of cooperation is in both their self-interest. Suggestions for promoting cooperation range from encouraging local governments to coordinate their efforts in providing public goods and services to consolidating existing local governments. This recent push for local government cooperation is not a new phenomenon. Since the rise of the suburb at the turn of the twentieth century, there have been calls for local government cooperation. Savitch and Vogel (2000) label this latest round of policy recommendations “New Regionalism”. They state that recent metropolitan area reforms try to “reduce disparities between the cities and their suburbs and enhance the ability of the city-region to compete in the global
economy” (Savitch and Vogel 2000: 198). Fleishman (2000) expands on the concept of New Regionalism. He states that “a core belief of New Regionalism is that there are social and economic relationships that extend across any metropolitan area without regard to political boundaries” (Fleischmann 2000: 213).

New Regionalism is a combination of local government – the “formal institutions and elections and established decision-making processes and administrative structures” and local governance - the voluntary and fluid cooperation among localities (Savitch and Vogel 2000: 161). Regional government is the formal institutions of local government; whereas, regional governance is the policy decisions of existing governments. New Regionalism promotes local government cooperation through changes in metropolitan area government and governance.

Fleischmann (2000) highlights the variety of options available to enable regional solutions to local government problems. These include city-county consolidation/annexation (Rusk 1993), regional governments (Downs 1994, Peirce and Johnson 1993), state governments (Orfield 1997), national government (Rusk 1999) and a variety of intergovernmental agreements, tax-base sharing, and public-private partnerships (Savitch and Vogel 2000, Katz 2000, Altshuler et al. 1999).

These policy recommendations are unified by the common goal of reducing economic disparities between center cities and their suburbs in order to promote economic growth. Income disparities between center cities and their suburbs are thought to signal weak metropolitan area economies. Many scholars attribute income disparities between center cities and their suburbs to the concentration of poor residents in the center city. Concentrations of poverty are believed to lead to an economically weak center city
that is an economic drag on the entire metropolitan area. Altshuler et al.(1999) argue that high levels of segregation lead to a decline in productivity.

A rough estimate is that when comparing metropolitan areas that have very high levels of segregation to those that (within the American context) have relatively low levels, the segregation of blacks results in a 3 to 6 percent decline in productivity (Altshuler et al. 1999: 9).

Rusk (1993) argues that it is important to avoid a significant economic decline in the center city, because metropolitan area growth is tied to a strong center city economy rather than a strong suburban economy. Center cities are thought to perform important agglomeration functions for metropolitan economies. This makes them the economic engine of the metropolitan area. High concentrations of the poor in center cities create a disincentive for new productive capital and labor to locate in the metropolitan area, thus lowering overall levels of economic growth (Peterson 1981).

Barnes and Ledebur (1998), Rusk (1993), Downs (1994), and Altshuler et al. (1999) conclude that the greater urban-suburban economic disparity, the slower metropolitan area economic growth. They posit that economic growth should be greatest in metropolitan areas where the ratio of center city per capita income to suburban per capita income approaches one. Under this theory closing the gap between center city and suburban income disparity should improve the overall economic health of the metropolitan area. Surprisingly, this hypothesis is not directly tested in the literature.

This omission is significant, as most recent policy recommendations regarding center city economic growth target reducing the income gap between center cities and their suburbs. The two dominant proposals for minimizing economic disparity between center cities and their suburbs are: (1) altering the boundaries of existing metropolitan area governments, and (2) promoting policy cooperation among metropolitan area
governments. Those pushing to alter existing structures of local government generally support consolidating local governments (Rusk 1993) or establishing new regional governments (Downs 1994). Those supporting increased cooperation in governance decisions among local governments often seek external incentives, such as state and national laws and grant monies, that will promote collective action among local governments (Orfield 1997, Rusk 1999, Altshuler et al. 1999, Dreier, Mollenkopf, and Swanstrom 2001).

**Altering Existing Metropolitan Area Governments**

The most aggressive policy recommendations for reducing city/suburb economic disparity involve consolidating existing local governments. City-county consolidations make it difficult for individuals to segregate themselves residentially, thus theoretically minimizing the concentration of poor residents in the center city. In addition, consolidated metropolitan area government is believed to streamline bureaucracy, making it easier to handle regional policy issues such as economic development and transportation. For example, the UniGov in Indianapolis, Marion County, Indiana is a multi-layered local government system one aspect of which is the overarching Department of Metropolitan Development. This department was created as a result of the city-county consolidation. It “decides key economic development issues, including area plans, land use, and zoning matters,” and it was instrumental in the successful redevelopment of downtown Indianapolis (Rosentraub 2000: 181). The policy coordination generated by consolidated local government is thought to be the best way to maintain center city economic health (and thus regional economic health).
Not all of the empirical evidence, however, suggests that city-county consolidations provide an economic boom to the local economy and streamline local government budgets. Fleck and Feiock (1999) examine the relationship between county economic growth before and after city-county consolidation in nine consolidated local governments. They find little evidence of consistent growth in the manufacturing, retail, and service sectors of the local economy after consolidation. They conclude that consolidation does not improve the economic health of a region and that the persistence and recurrence of the consolidation issue on local agendas may be due more to its distributional consequences than to its impact on economic growth. The mixed evidence regarding the economic impact of city-county consolidations suggests that altering existing structures of local government, either through incremental annexation or wholesale city-consolidations, does not automatically improve regional economic health.

Even if all of the empirical evidence definitively supported the hypothesis that consolidation improves metropolitan area economic health, it is a politically challenging task to alter (much less eliminate) existing local governments. North (1990) argues that institutional change generally occurs incrementally. All institutions are encumbered by customs, traditions, and codes of conduct. The many failed city-county consolidation referenda provide some evidence of the political difficulty of altering existing institutions. Areas such as Charlotte-Mecklenburg county, North Carolina, have repeatedly attempted to merge, but the proposals have been consistently thwarted by voters. Fleischmann (2000) notes that there have been 28 consolidation efforts in Georgia since 1933, and only three of them have been ratified. Savitch and Vogel (2000) point out that "only 20 percent of referenda on consolidations have been approved by the
electorate (Harrigan and Vogel 2000). San Antonio, Sacramento, Portland, and Charlotte are some recent cases where consolidation could not pass muster" (Savitch and Vogel 2000, 162). Simply put, once a government is established it is difficult to abolish or alter.

One alternative to city-county consolidation is annexation. Annexation allows incremental change to city boundaries. It is the most common mechanism for altering existing local government boundaries, but even this mechanism for expanding city boundaries often meets organized resistance. It is not uncommon for the area being annexed to resist being incorporated into a larger city (Marando 1979, Miller 1981, Burns 1994). Miller (1981) observes that county residents in unincorporated areas often form limited local governments to avoid being engulfed by an existing larger city.

Successful use of annexation power is often dependent upon the nature of the state laws governing its use. Palmer and Lindsey (2001) provide an extensive review of variations in state annexation laws, the typologies used to classify those laws, and the empirical research evaluating the impact of those laws. Their review of the extant literature leads to the conclusion that the content of state annexation laws can have significant, predictable effects on the overall rate of annexation (66).

In states where municipalities have final decision-making authority and can act independently of the population being annexed, annexation is more likely to occur. In states where annexation is contingent upon approval of property owners or residents of the territory to be annexed, annexation is significantly less frequent (Palmer and Lindsey 2000: 66)

Houston, Texas is a good example of a large center city with liberal annexation authority. Texas annexation laws permit unilateral annexation, requiring only the annexing city to approve the merger. The city being annexed does not have a vote. This liberal annexation authority has enabled Houston to grow dramatically over the past forty years.
Finally, one alternative to changing current local government institutions is creating new regional governments. Downs (1994) advocates establishing regional governments to coordinate the policy and planning decisions of existing local governments. He argues that the only way to curb urban sprawl and effectively manage future development is to force local governments to abdicate much of their policymaking authority to regional organizations who are better equipped to make "big picture" decisions. The problem with this solution is that, as the experience of annexation illustrates, local governments often protest relinquishing their decision making authority. Local government power is already limited by virtue of being at the bottom of the federal hierarchy; consequently, it is unlikely that municipal governments will welcome the formation of another layer of local government. Local bureaucrats and elected officials may organize and protest any state attempt to transfer their authority to a newly created regional authority. Given that local bureaucrats and elected officials have established political networks with the resources to overcome many of the obstacles to collective action, it is likely that their preferences will be given greater consideration by the state legislature than those of proponents of new regional governments. Because these new governments have yet to be created, they lack an organized, established support group.

Despite these practical challenges, altering existing local government boundaries or creating new local governments is a frequently proposed solution to the problems of economically declining center cities and/or metropolitan areas and segregation of the poor. Surprisingly, much of the literature advocating these proposals lacks an empirical test of the relationship between metropolitan area government structure and metropolitan
area economic growth. This omission limits our ability adequately to evaluate the potential impact of these policy recommendations.

**Federal and State Incentives For Cooperative Governance**

The inherent difficulties of city-county consolidation, and the barriers to forming regional governments, have led many to consider alternate ways to promote cooperation among metropolitan area governments. The most common mechanism for local government cooperation is incentives from state and national governments. State and national governments often provide incentives for intergovernmental agreements, tax-base sharing, and public-private partnerships. Orfield (1997) argues that the only way to minimize the economic costs of concentrated poverty is to enact state legislation aimed at equalizing resources available to all metropolitan area residents. The problems of poverty have a regional impact, thus a regional solution is necessary. To combat poverty and its negative social and economic consequences, Orfield promotes reforms in “housing and reinvestment, property tax-base sharing, schools, land use and infrastructure planning, transportation and welfare” (Orfield 1997: 75). These reforms are best achieved through state legislation targeted at promoting local intergovernmental cooperation. He reviews the Minnesota experience, where these reforms passed the Minnesota State Legislature on the strength of a coalition comprised of the Twin Cities and their poor suburban ring communities. He argues that this legislative coalition was formed as a result of the center city and its low and lower-middle class suburban rings realizing that they faced similar problems of increasing concentrations of poverty and lower tax bases. Identifying these common policy objectives allowed these areas to work together to affect state government.
The applicability of Orfield’s story to center city/suburb coalitions is limited. First the coalition he described was geographic based. Notably the center city was not coordinating its state legislative efforts with suburban areas who did not share a common border. Nor were any of the coalition members wealthy suburbs. It is unlikely that wealthy, outer ring suburban governments would embrace forming a state legislative political coalition with the center city. Most suburbs would not find it in there economic interests to cooperate with the center city. In addition, even when cities and suburbs share common policy objects such as regional economic growth, the history of antagonism between the two areas may be so great that the costs of cooperation are high.

Rusk (1999) reinforces Orfield’s (1997) call for state legislation facilitating regional cooperation, but he also promotes the role of the federal government. He argues that changes in existing federal policies, as well as the creation and implementation of new federal policies, are necessary to reduce concentrations of poverty, curtail urban sprawl, and promote regional economic well-being. He concludes that federal policy mandates, in conjunction with federal dollars, can be used to improve the economic and social conditions in America’s cities.

Most recently, Drier, Mollenkopf, and Swanstrom (2001) advocate changes in federal policy to promote service equality across center cities and their suburbs. They recommend changes in existing federal tax laws, implementing federal programs on a regional (rather than a national or single community) basis, creating new federal legislation that establishes regional governments and creates a variety of programs aimed
at assisting the poor.⁵ Although they advocate creating and expanding a laundry list of federal programs, they claim that they are not advocating “huge tax increases, massive new spending programs, or even significant redistribution to the central cities.” Rather, they claim to be calling for “the federal and state governments to level the playing field, encourage regional cooperation, and foster close relationships between working families and opportunities” (Dreier, Mollenkopf, and Swanstrom 2001: 229). In reality, these sweeping changes are an expensive departure from the status quo, and they would require building an unlikely political coalition between center cities, poor suburbs, and wealthy suburbs.

There are two problems with these recent calls for increased federal and state legislation to foster local government cooperation. First, it is difficult to build the necessary political coalition to create and implement these sweeping proposals. Second, even when they are implemented they are short lived. History demonstrates that federal policies can generate incentives for local government cooperation, but most of this cooperation is short lived. It does not last beyond the life of the grant program that generated it. If the incentives for local government cooperation are removed, local government cooperation often collapses. For example the federal grant-in-aid programs of the 1970s and 1980s (i.e. Federal Management Circular A-95) were effective at promoting regional cooperation among local governments. These policies often required federal grant applications by local governments to be reviewed and approved by some type of regional authority. This requirement forced many localities to form regional

⁵ The programs Dreier et al. (2001) recommend include: equalizing school per capita expenditures, raising the minimum wage, federal child health insurance, subsidized day care, and relocating the poor.
governments, in order to apply for and receive federal grant monies. These regional
governments were short lived for two reasons. First, existing local governments were
often reluctant to cede much authority to these new regional governments. Second,
existing local governments often resented the imposition of an additional layer of
government and were eager to cut ties with these regional governments once federal
mandates no longer required them to do so. Stein (1980) finds that many of these
governments faded away as soon as the federal programs requiring their formation were
abolished.

Even if federal programs were able to institutionalize local government
cooperation, the current political climate makes it unlikely that the federal government
will embrace grant programs that send large amounts of federal tax dollars into the center
city. Over the last generation federal spending on urban areas has steadily declined. This
decrease in spending is the result of a shift in federal government grant policy as well as a
shift in philosophy regarding the federal government’s role in local policy. Under the
Kennedy and Johnson administrations, there was a dramatic expansion of federal
government spending in urban areas. Nixon scaled back this federal spending in urban
areas through the introduction of block grants. Under the Republican block grant
program, cities and states received a lump sum of money from the federal government to
spend as they saw fit. The program increased local control over federal funds, but in
many cases urban areas received substantially less money than they had under previous
grant programs. The Reagan administration further restricted the role of the federal
government in cities by eliminating many federal grant programs altogether. Many of
these programs were eventually restored, but not to their previously high levels. Over
time, cities learned they could no longer rely on the federal government to increase their annual budgets. It is unlikely that the George W. Bush administration will reinstate significant federal grant programs that target U.S. cities. First, the Bush administration philosophically reflects its Republican predecessors and their hostility to federal grant programs. Second, the recession of 2001 has decreased federal revenues and the war on terrorism has eliminated the budget surpluses of 2000, making grant resources scarce.

It appears that federal and state incentives do not always translate into stable long-term local intergovernmental cooperation. This is not to say, however, that such cooperation is impossible. There is evidence that many local governments have engaged in stable long-term intergovernmental agreements in specific policy areas (ACIR 1985). What explains this cooperation? Is it influenced by the structure of metropolitan area government? These questions are examined in Chapter 2.

Summary

Previous research demonstrates that center cities and their suburbs are economically linked. The empirical evidence for this conclusion, however, is limited to one decade of analysis (1979-1989). Examining this relationship over a longer period of time would provide insight into its stability and would provide a stronger foundation for future policy recommendations. Establishing an economic bond between center cities and their suburbs over time would demonstrate that the two areas have an incentive to cooperate in assuring metropolitan area economic health. It would also set the stage for further questions about the nature of this relationship.

One key indicator of this relationship is per capita income. Center city per capita income has fallen behind suburban per capita income over the last twenty years. What is
the significance of this increase in income disparity? Does it harm metropolitan area
economic health? Rusk (1993) argues that center city/suburb income disparities indicate
economically weak metropolitan areas. He links fragmented metropolitan area
government with high levels of income disparity. This disparity is expected to slow
metropolitan area economic growth.

Chapters 3 and 4 examine the economic relationship between center cities and
their suburbs from 1969-1989. Chapter 3 establishes that center cities and their suburbs
are economically linked over time. It also finds that the impact of the state economy on
center city/suburb relations is growing stronger over time. Chapter 4 finds a link between
metropolitan area government structure and center city/suburb income disparity, but not
one predicted by previous research. The analysis reveals a positive but relatively flat
relationship between local government fragmentation (i.e. the number of general purpose
metropolitan area governments per 10,000 population) and income disparity. It also
reveals a negative and highly significant relationship between the geographic
concentration of local governments (i.e. the number of general purpose metropolitan area
governments per square mile) and income disparity. This finding indicates that the
geographic relationship among local governments is an important determinant of center
city/suburb income disparity. Chapter 4 also finds that the relationship between center
city/suburb income disparity and metropolitan area economic growth has changed over
time. Between 1969 and 1979 income disparities that favored the center city lead to
metropolitan area economic growth. This finding is consistent with the expectations of
the research discussed in this chapter. The direction of this relationship flips between
1979 and 1989, so that income disparities that favored the suburbs promoted economic
growth. This unexpected finding indicates that the economic importance of the center city to the region may be waning. It may no longer be necessary to promote economic parity between center cities and their suburbs in order to ensure metropolitan area economic health.

Collectively, these findings demonstrate that center cities and their suburbs have a strong economic incentive to cooperate, but they do not confirm the hypothesis that altering the structure of metropolitan area government is the appropriate mechanism for this cooperation. Consolidated metropolitan area government may not yield the promised social and economic benefits. The challenge is to find ways to induce local government cooperation without changing existing political boundaries. Chapter 2 examines previous research on local intergovernmental cooperation. It proposes a theory of institutional collective action that is examined in light of local intergovernmental service agreements. Chapter 5 empirically examines the relationship between metropolitan area government structure and local intergovernmental cooperation. It finds that the geographic density of metropolitan area governments is significantly and positively related to the incidence of intergovernmental agreements. In other words, as the number of local governments per square mile increases so does the number of local intergovernmental agreements.
Chapter 2

Local Intergovernmental Cooperation: Institutional Collective Action

The common thread in much of the literature regarding center city/suburb economic relationships is a call for increased policy cooperation between the two areas. As discussed in chapter 1, this policy cooperation can come in the form of regional government or regional governance. Regional government involves altering existing institutions of local government. This could occur through annexation, city-county consolidation, or the creation of new regional governments. These forms of intergovernmental cooperation, however, often have high collective action costs and are historically difficult to implement. Regional governance occurs when existing local governments voluntarily coordinate their policy decisions. This is the more politically viable alternative for regional cooperation, because it allows existing governments to coordinate their policy efforts in a variety of ways and tailor their cooperation to their own preferences. This policy coordination may be formal or informal, and may or may not require revenue exchanges among local governments.

Regional governance is often thought to be less effective than regional government in promoting local government cooperation. This is because fragmented metropolitan area government is associated with competition, whereas consolidated metropolitan area government is associated with cooperation. Fragmented local government generates intergovernmental competition, which leads to a more efficient public sector. In contrast, consolidated local government generates economies of scale, minimizes externalities, and reduces service inequalities. With a few exceptions, most

---

6 See Chapter 1 for a more complete discussion of these problems.
commentators assume that an increase in the number local governments generates increased competition among those governments, but they differ as to the expected impact of that competition. Supporters of fragmented metropolitan area government argue that the impact of local government competition is largely positive, whereas supporters of consolidated metropolitan area government argue that the impact of local government competition is largely negative. Both sides of this debate, however, largely ignore the possibility that local governments in fragmented metropolitan areas can (and do) cooperate. In many cases, local government cooperation is more efficient than competition. When fragmented local governments cooperate in the production and provision of goods and services, they realize some of the economic benefits associated with consolidated local government. Under certain circumstances local governments in fragmented metropolitan areas may be able to benefit simultaneously from the market efficiencies of competition and the cooperation. In practice many fragmented local governments realize the benefits of cooperation. Numerous local governments contract with each other daily to provide and produce numerous goods and services. The question remains: What conditions promote fragmented metropolitan area government cooperation?

This chapter examines the relationship between metropolitan area government fragmentation and local intergovernmental cooperation. It defines intergovernmental cooperation and develops a theory of institutional collective action. This theory is then applied to previous research on local intergovernmental cooperation. Finally, local government geography and policy attributes are introduced as key predictors of local intergovernmental cooperation.
Local Intergovernmental Cooperation

Local intergovernmental cooperation, broadly defined, includes all policy activities that require some level of policy coordination between one or more local governments. These efforts may include formal or informal agreements among local jurisdictions and may (or may not) require the exchange of revenue. Formal intergovernmental cooperation often includes written agreements among local governments. In some cases, these agreements are codified by one or all of the participating local governments. Formal intergovernmental agreements may dictate a division of labor among local governments which may (or may not) require the transfer of funds between those governments. For example, a city and county may formally agree that the city will provide bus service to both city and county residents, and in return the county will maintain the roads in both areas. This division of labor may or may not require the exchange of revenue. Alternatively the county may simply contract with the city to provide bus service to its residents. This service arrangement would likely require a revenue based contract between the two areas, because the county is not providing a service benefit to the city in exchange for the bus service.

Not all local intergovernmental cooperation is formal. Informal intergovernmental cooperation is defined as unwritten agreements among city officials. These intergovernmental agreements are often the result of “handshake” deals among local officials, where the division of service responsibility is understood but never formalized. For example, a city may maintain the county parks within its jurisdiction, based on a mutual understanding between the directors of the city and county parks and recreation departments. Informal agreements often have the effect of functionally
coordinating service activities, but they are often based on "handshake" deals. These types of agreements are most likely to occur when local government officials have worked repeatedly with each other for a number of years or when local government officials know each other through professional and educational networks such professional associations or graduate/professional school (Bingham et al 1981). Repeat interactions and previous relationships among local officials can generate significant reservoirs of trust and performance expectations that can facilitate local government cooperation. The existence of personal as well as professional relationships among local officials increases the likelihood that local governments will enter into informal intergovernmental agreements. Unfortunately, they are extremely difficult to quantify, because these agreements are not written and they rarely involve the transfer of funds between local governments.

Interestingly, failed attempts to alter regional government often lead to regional governance solutions. For example, failed city-county consolidations have often led to formal intergovernmental cooperation. Mead (2000) reports that Charlotte and Mecklenburg County in North Carolina sought to consolidate for years, but after numerous failed attempts, the two areas turned to functional consolidation as an alternative. The city and county formally divided service responsibilities such as police, fire, and roads in order to increase service coordination and efficiency. Similarly, Marando (1979) notes that a failed attempt at city-county consolidation in Sacramento led fire chiefs in 23 fire districts to begin to meet regularly to discuss functional consolidation. As a result, they adopted a single county-wide fire code, began serious
discussion on consolidation of city and county planning, created a citizen advisory committee, and formed an umbrella water agency (Marando 1979: 410).

Institutional Collective Action

All local intergovernmental cooperation, both formal and informal, is institutional collective action. It is a group of institutions working collectively to achieve shared policy objectives. A theory of institutional collective action can be derived from theories of individual collective action. Olson (1965) argues that collective action occurs when individuals find it in their self-interest to join a group and engage in collective behavior. Individuals join groups for a variety of reasons, but the two most dominant motivations are 1) to receive benefits they could not otherwise receive (Olson 1965), and 2) to advance common policy goals and preferences (Rothenberg 1992). Group formation is often facilitated by the presence of a strong leader and/or entrepreneur who is willing to overcome the costs of collective action (Salisbury 1969, Wilson 1995). Entrepreneurs have an incentive to form groups when they expect to receive a disproportionate benefit from the group. The benefit may be in the form of a job with the organization, access to the institutional powers and resources of the group, economic gain, or the satisfaction of seeing a specific issue addressed.

Individual collective action is most likely to occur in small groups because the transaction costs of cooperation are dramatically reduced. Small groups increase the likelihood that members will realize direct benefits from group membership and participation. They also make it easier to monitor the behavior of members, minimizing shirking and non-compliance among group members. Collective action in large groups, by contrast, is much more difficult. Large groups diminish the ability of members to
realize significant personal benefits from group membership. They also make it difficult to monitor the behavior of group members. This makes it easier for members to shirk their responsibilities and free-ride on the efforts of others. In some cases, if a group is too large, individuals may be able to receive the benefits of the group’s efforts without formally joining the group (Olson 1965). Olson argues that the best way for large groups to overcome the costs of collective action is through some form of coercion and/or selective incentives for individual members (Olson 1965, Wilson 1995). Coercion occurs when group membership is necessary to avoid some type of sanction. For example, in many states it is necessary for some workers to join a union before obtaining employment. In this case, the threat of unemployment is the incentive for group membership. Selective incentives for group membership are positive individual benefits that can only be obtained through group membership. Federal grant-in-aid monies often provide selective incentive for local government cooperation. For example, certain federal planning policies in the 1970s required federal grant applications by local governments to be reviewed and approved by some type of regional authority. This requirement created an incentive for local governments to cooperate.7 The goal of selective incentives is to ensure that all group members receive direct, unique benefits from formal group membership. They are intended to reduce the number of free-riders on the group’s efforts.

Institutional collective action can be explained using these basic principles of individual group formation. Institutional collective action occurs when local governments join together to achieve common policy objectives, such as cost-effective

---

7 Chapter 1 notes that the institutional collective action generated by these programs was not long lived. Stein (1980) finds that many of these governments faded away once the
service provision or economic growth. The incentives for institutional collective action are similar to those for individual cooperation: 1) group size (Olson 1965), 2) common policy objectives (Rothenberg 1992), 3) coercion/selective incentives (Olson 1965), and 4) presence of a strong leader/policy entrepreneur (Salisbury 1969, Wilson 1995, Schneider 1989). Two additional incentives for institutional collective action should be considered when local governments are the institutions working collectively. These are the geographic density of metropolitan area governments and the attributes of the goods and services being provided. The importance of the geographic relationship of local governments is largely ignored by previous research and the importance of policy attributes has not been fully examined.

Determinants of Local Government Cooperation

Previous research regarding local government contracting finds that local government cooperation is a function of the economic benefits of lower service costs, the desire for service continuity across local jurisdictions, state laws, federal grant programs, and the presence of a strong policy entrepreneur. These findings can be evaluated in light of the theoretical causes of government collective action: the geographic density of metropolitan area governments, the economic attributes of goods and services, group size, common policy objectives, coercion/selective incentives, and the presence of a strong leader/policy entrepreneur.

Geographic Density of Metropolitan Area Governments

Geography impacts local government cooperation in a variety of ways. First, local governments are place-bound. They may be able to expand their boundaries by annexation or consolidation, but they are not mobile. This lack of mobility limits the federal programs requiring their formation were abolished.
number of potential collaboration partners. Local governments generally cooperate with geographically proximate governments. Theoretically, a city could contract with another city located in another part of the state or even the country, but the costs of providing services across the miles make it prohibitively expensive. For example, piping clean water from a county’s well into a city within that county is not as expensive as piping clean water across the state.

The geographic limitation on potential contracting partners means that an increase in the number of metropolitan area governments signals an increase in the number of opportunities for intergovernmental cooperation. A large number of local governments in a metropolitan area indicates a large number of potential service providers. The number of available service providers is a key determinant of local government contracting. It is impossible to contract for service production with other governments if they do not exist. Morgan and Hirlinger (1991) recognize the importance of geography in their analysis of intergovernmental service contracts. Their study of local intergovernmental agreements includes a dummy variable to indicate if a city was located in a metropolitan area. They reason that cities of all sizes located in metropolitan statistical areas are more likely to have intergovernmental contracts than cities not located in metropolitan statistical areas due to access to plenty of suppliers (i.e. other governments). Their findings confirmed this hypothesis.

Morgan and Hirlinger’s study, however, only accounts for the supply-side impact of geography; it does not account for the geographic relationship among metropolitan area governments. For several reasons an increase in the geographic concentration of local governments is likely to increase the propensity for intergovernmental cooperation.
First, the close proximity of local governments increases the likelihood that local
government officials in adjoining governments have personal as well as professional
relationships. These formal and informal relationships can facilitate local government
cooperation. Stone’s (1989) study of Atlanta finds that norms of reciprocity and trust
generated by informal relationships among elected officials and the business community
are key elements to a stable governing coalition. These same norms and informal
relationships are important to local government cooperation. Personal relationships
among local government officials across jurisdictions, and repeat interactions among
those individuals, may be a catalyst for local government cooperation.

Second, the geographic density of metropolitan area governments also influences
the ability of metropolitan area residents to live, work, and recreate in multiple
communities. Increases in the geographic density of metropolitan area governments
promote the fluid movement of residents across government borders, which create strong
economic and social ties between these areas. These ties create political incentives for
local elected officials to work together. Specifically, elected officials in multiple
jurisdictions are able to take credit for policies that positively impact the entire
metropolitan area - not just their own community. Each local official who takes credit for
the benefits derived from local government cooperation should receive an electoral boost
(Mayhew 1974).

Third, an increase in the geographic density of metropolitan area governments
increases the likelihood that policy spillovers will affect multiple local governments.
Netzer (1997) argues this point.

It is inevitable that, if there are numerous local government units with substantial decision-making authority within a metropolitan area . . . the tax and expenditure decisions of individual units will have effects, positive and negative, that spill over the boundaries of that unit and affect households, firms and governmental entities elsewhere in the metropolitan area (Netzer 1997: 204).

All local governments in geographically dense metropolitan areas face similar problems of externalities. The desire to minimize positive and negative externalities should encourage local government cooperation.

**Economic Attributes of Publicly Provided Goods and Services**

The impact of the geographic density of metropolitan area governments is mediated by the economic attributes of goods and services. Publicly provided goods and services that require a significant capital commitment, benefit from economies of scale, and have easily monitored outputs are more likely to be collectively produced and/or provided.

Capital-intensive projects should promote local intergovernmental cooperation, because they benefit from economies of scale. Savings from economies of scale are realized when mass production of a good or service reduces its average cost. Capital intensive goods and services generally require large amounts of equipment and materials that are cheaper when purchased en mass. The high input costs associated with capital-intensive goods and services create a barrier to entry for many small governments. Small local governments have neither the tax base nor the access to capital markets necessary to fund the high start-up costs of many capital intensive projects. Consequently, smaller local governments are often unable to produce them alone (Ostrom, Tiebout, and Warren 1961, Stein 1990, Ferris and Graddy 1986, 1988). If they want to provide these types of
goods and service to their residents, they must either work collectively with each other or contract with larger governments or private vendors (Stein 1990). For example, Miller (1981) argues that many of the Los Angeles bedroom communities would never have been established without the ability to contract with the county for the provision of basic services, such as police and fire protection and water and sewer services. Contracting for service production is often the only way small local governments survive.

The ability to monitor service outputs also influences the likelihood that local governments will cooperate. Ferris and Graddy (1986) argue that it is difficult to write a contract for the production of services whose outputs are not tangible or whose production is complex. Services such as garbage collection have tangible outputs that are easy to monitor and have simple production requirements. These types of services lend themselves to contracting.

**Group Size**

Group size is also an important determinant of collective action. The smaller the group, the easier it is to form. Small groups have the benefit of lower monitoring costs and less shirking. Group size has two components when applied to government collective action: the number of governments seeking to work together and the size and relative homogeneity of their constituencies. The number of governments seeking to cooperate directly relates to Olson’s (1965) notion of group size - the higher the number of governments, the higher the organization costs, the smaller the distribution of benefits, and the easier it is to free ride. In particular transaction costs increase with the number of organizations included in the group (Williamson 1975). Ugboro, Obeng, and Talley
(2001) the define the transaction costs associated with local intergovernmental cooperation as

the costs of extensive decision making for negotiating, operating, and enforcing the provisions of the system. The negotiation cost, in particular, may be high because it is time intensive. Enforcement costs are those ensuring compliance with system arrangements or arrangements by the merged or cooperating agencies (Ugboro, Obeng, and Talley 2001: 82-83).

As the number of local governments seeking to cooperate increases, the costs of negotiation and enforcement also increase. Furthermore, local governments will only cooperate as long as they receive a direct benefit from the group’s activity. Stein (1980) demonstrates that as soon as the benefits of group membership subside, they will leave the group.

Additionally, the size and homogeneity of the affected constituencies influences the transactions costs of government collective action. Each government represents constituent populations of varying sizes and policy preferences. Local governments must aggregate the preferences of their citizens before they can even begin negotiations with other local governments. Institutions seeking to cooperate must simultaneously accommodate a variety of internal and external policy preferences. As the diversity of policy goals and objectives that must be accommodated increases, so does the cost of collective action. For this reason, large local governments with heterogeneous populations may find it more difficult to cooperate with other local governments than small local governments with homogeneous populations. Governments representing homogeneous populations are presumed to have constituents with similar policy preferences. Thus, these institutions must expend fewer resources to ensure cooperation and unity of preferences among their constituents. This in turn facilitates their
participation in intergovernmental cooperation. Ferris and Graddy (1986) also reach this conclusion. They “expect governments with homogenous local populations to be more likely to contract out for services in general” because “[d]isputes over service outputs are less likely to arise when there is relatively small variation in citizen demands” (Ferris and Graddy 1986: 333).

Thus, group size has two dimensions in local government cooperation. The number of governments seeking to cooperate, in conjunction with the relative heterogeneity of their constituent populations, should influence the likelihood of intergovernmental cooperation. Intergovernmental cooperation is least likely when there are a large number of local governments with heterogeneous populations.

**Common Policy Objectives**

Local governments will cooperate only if it is in their self-interest to do so. Promises of cost savings and service continuity often provide the necessary common ground for collective action. Cost savings are the dominant reason local governments contract with private firms, non-profit firms, and other governments for service provision and production (Stein 1990). Ferris and Graddy (1986) argue that the potential savings from service contracts are derived from three primary sources: sector differences in labor practices, competition among suppliers, and economies of scale. The primary economic motivation for local intergovernmental contracting is savings derived from economies of scale. This is because the other two factors are inapposite: labor cost is roughly equivalent across local governments and local governments are less likely to enter into a competitive bidding war to provide services (Ferris and Graddy 1986). Economies of
scale are realized when larger producers can obtain equipment and materials at a lower cost, and when goods and services are used to capacity.

The desire for service continuity across local jurisdictions is another incentive for local intergovernmental agreements (Ugboro, Obeng, and Talley 2001). Metropolitan area governments often strive to ensure that the provision of certain goods and services is seamless. For example, roads do not end at city boundaries, because cities cooperate to ensure a consistent transportation system across jurisdictions. In addition, many local government policies produce spillover benefits and costs to surrounding local governments, especially if the costs are magnified when the quality of some services is allowed to vary across jurisdictions.

In the Los Angeles area, for example, city managers cited “standardization of minimum service level” as the primary effect of contracting with the county. As Sonenblum, Kirlin, and Ries (1977:42) pointed out, inadequate maintenance of storm drains in one place can cause flooding in other communities, or less desirable recreational facilities in one city can lead to overloaded facilities in other places (Morgan and Hirlinger 1991: 132).

These “extralocal spillovers” provide a strong incentive for intergovernmental agreements,

Leaders and Entrepreneurs

Intergovernmental cooperation does not occur without some individual initiative. Local government cooperation is often the result of innovative leaders who are willing to take advantage of a specific opportunity. Schneider, Teske, and Mintrom (1995) label these individuals “political entrepreneurs”. These are individuals who “perceive opportunities for political and policy change, advocate innovative ideas, and transform political arenas (or “markets”)” (Schneider, Teske, and Mintrom. 1995:3). Schneider et al. (1995) argue that these entrepreneurs are motivated by personal gain much like their
private sector counterparts, but the personal gain comes from power, prestige, and policy influence, rather than personal wealth. It is the promise of personal gain that motivates these individuals to overcome the transaction costs associated with group formation, policy development, and policy implementation. Schneider et al. (1995) identify two groups of political entrepreneurs: "political entrepreneurs, such as mayors and city council members who operate in the world of electoral politics; and managerial entrepreneurs, such as city managers or high-level managers of public bureaucracies who control the resources of established agencies" (12). Both of these groups are influential in promoting local intergovernmental cooperation.

Strong policy leaders can be instrumental in overcoming opposition to local intergovernmental cooperation. Political pressure from local residents, as well as municipal employees and unions, often influences the decision to contract for the production of a particular good or service (Morgan and Hirlinger 1991, Ferris and Graddy 1986). Resident populations may vary in their support of intergovernmental contracting. Heterogeneous populations may be so diverse in their policy preferences that it is more efficient for local governments to produce most of their goods and services rather than contracting with other local governments. In addition, local government employees and union members often resist local government contracting, due to potential lay offs and shrinking budgets. A strong leader, however, may be able to unify heterogeneous populations and persuade local government employees and unions that cooperating with other local governments is in their best interests. The absence of a strong political leader may make intergovernmental cooperation especially difficult if a significant number of residents, government employees, or union members do not agree with the decision to
contract with other local governments. Cooperation with other local governments may even be difficult in the presence of a strong leader if opposition from one or more of these groups is high. Even politically strong elected officials will not promote policies that jeopardize their own electoral security (Mayhew 1974, Bledsoe 1993).

In some cases, the promise of cost savings from local intergovernmental cooperation generates electoral benefits to elected representatives. These benefits often spill over to other elected officials from the same area. For example, if multiple jurisdictions work together to obtain a federal grant to build a new wastewater treatment plant, all of the local elected officials from those jurisdictions can take credit for the new facility. In addition, members of Congress and state legislators can also take electoral credit for the new facility. Mayhew (1974) argues that credit claiming is an important element of an incumbents reelection bid. Elected official try to give the impression that are personally responsible for policy decisions that benefit their districts. When a project promises to generate political goodwill for multiple elected officials simultaneously, the likelihood of intergovernmental cooperation increases, because all elected officials involved in the agreement can claim credit for its success.

Coercion/Selective Incentives

Local government collective action may be facilitated by selective incentives and regulations from the state and federal governments. Historically, the federal government has provided financial incentives for local government cooperation through grant monies, while state governments have encouraged (and discouraged) local government cooperation through regulations.
As discussed previously, the federal grant-in-aid programs of the 1970s (i.e. Federal Management Circular A-95) required that local governments submit grant applications to regional review boards as a condition for receiving federal funds. This requirement led to the formation of numerous regional governments, coercing local government cooperation. Many of these regional governments, however, were short-lived, because the A-95 programs were terminated in 1982. As a result, most cities withdrew from the newly-formed regional governments because they received little benefit from participation (Stein 1980). This exodus dramatically limited the regional governments' power and effectiveness. In many cases, they ceased to exist. The fact that only a few of these governments remain demonstrates that federal policies can temporarily force local government cooperation, but unless each government receives some direct benefit from that cooperation (i.e. grant monies), they will cease to cooperate.

State laws have a similar influence on local government cooperation. They influence the number of governments available for cooperation by regulating local government formation and the expansion/contraction of existing local government boundaries (Burns 1994, Miller 1981, and Foster 1997). State laws also influence the costs of intergovernmental collective action, through regulation of intergovernmental agreements. The Advisory Council on Intergovernmental Relations (1992) reports that a majority of states have laws that allow interlocal service agreements. Unfortunately, the study does not elaborate on the nature and scope of these state laws. It is likely, however, that states that have laws permitting intergovernmental agreements are regulating the terms and conditions of those agreements. They may even regulate the types of policies
eligible for local intergovernmental cooperation. Each constraint the state places on local governments increases the costs of collective action and decreases the likelihood that they will choose to cooperate. Local governments may be more likely to cooperate when the state does not regulate their behavior.

Summary

Local government collective action occurs when local governments join together to achieve common policy objectives. The incentives for institutional collective action include the geographic relationship of local governments, the economic attributes of goods and services, group size, common policy objectives, coercion/selective incentives, and the presence of a strong leader/policy entrepreneur. A combination of these factors can be used to explain the individual decisions of particular cities to contract with each other. The geographic relationship of metropolitan area governments and the economic attributes of the policy being collectively provided condition the impact the other determinants have on local government cooperation.

Most previous research on local government cooperation uses the city as the unit of analysis. Explanations of local government cooperation are based on city attributes and city policy goals. This body of research does not adequately test the relationship between metropolitan area government structure and the incidence of local intergovernmental cooperation. Consequently, it sheds little light on the question whether it is possible for local governments in fragmented metropolitan areas to cooperate as well as compete? If so, does that cooperation translate into metropolitan area economic growth?
Previous research also pays little attention to the importance of the geographic relationship among local governments. Increases in the geographic concentration of local governments lead to increases in policy spillovers, which are best addressed via local intergovernmental cooperation. Chapter 5 examines the relationship between metropolitan area government structure and local government cooperation. Specifically, it examines the incidence of local intergovernmental agreements as a function of the geographic density of metropolitan area governments.
Chapter 3

Economic Ties: The Center City/Suburb Economic Relationship

Since the creation of the American suburb, center cities and the surrounding local governments have struggled to find the appropriate balance between cooperation and competition. Center cities and their suburbs often find themselves competing for productive capital and labor (Tiebout 1956, Peterson 1981) when cooperation may actually be in their best interest (Barnes and Ledebur 1998). The tension between the two areas has its roots in the preferences driving local government formation. Most suburban communities were established to allow individuals to leave the center city and enjoy the benefits of relatively rural areas. Suburban residents are thought to prefer racial and economic homogeneity (Burns 1994) and small local governments that provided minimal services and low taxes (Miller 1981). These preferences stand in stark contrast to the large center city governments that provide a wide range of goods and services to a heterogeneous population. The variation in policy demands on the center cities and their suburbs often generates competition among the two areas. Thus it is no surprise that issues such as annexation and consolidation are often highly divisive and produce intense competition.

In some cases, however, cooperation is in the self-interest of both the center city and its suburbs. Suburban governments are in the business of providing high-quality, low-cost services (Miller 1981, Stein 1990). Resident demands for cost-effective services and low taxes often create incentives for suburban governments to seek alternative forms of service provision and production (Stein 1990). These alternatives include contracting with private for-profit and non-profit firms, as well as other local
governments, to realize cost savings. Local governments are best able to meet resident policy demands when the economy is strong, because the tax base is higher. Peterson (1981) argues that it is always in the city’s interest to pursue economic development policies; consequently, local governments have a strong incentive to promote local economic health. It is likely that if suburban governments could provide low-cost goods and services and ensure a strong local economy in isolation, they would do so. On the other hand, if these economic objectives necessitated cooperation with other local governments (most notably the center city) they would most likely do so. Establishing an economic tie between center cities and their suburbs is the first step toward explaining center city/suburb economic and policy relationships. If the two areas are not economically linked, there is little incentive for cooperation.

This chapter addresses three important questions: First, are center cities and their suburbs economically linked? Second, if so, what does this economic relationship look like over time? Finally, if there is a link, what factors explain this relationship?

These questions are addressed in four sections. The first examines previous research regarding center city/suburb economic ties. It reviews the three dominant explanations for the economic relationship between center cities and their suburbs: 1) suburban local governments were established as a result of their proximate location to the center city, 2) the state economy, and 3) the market of local governments links two areas. The second section outlines the hypotheses, discusses the data, and provides a research design. The final sections review the findings and discuss their implications.
Center City/Suburb Economic Ties

Previous research demonstrates that center cities and their suburbs are economically linked. Changes in center city per capita income are significantly and positively related to changes in suburban per capita income (Barnes and Ledebur 1998; Savitch et al. 1992, Voith 1992, 1993, Post and Stein 2000). Most of the research examining this relationship is limited to one decade of analysis (1980-1990). Furthermore, with the exception of Blair and Zhang (1994) and Post and Stein (2001), this relationship has not been tested against an important rival explanation: state economic conditions. The lack of data across time, in conjunction with an incomplete picture of the impact of the state, seriously limits the conclusions that can be drawn from this research. It is possible that the economic relationship between center cities and their suburbs is a relatively recent phenomenon, or conversely, it is possible that the economic relationship between the two areas has waned over time. Similarly, the impact of the state economy on this economic relationship may have changed over time.

These omissions in the literature are significant, as many recent policy recommendations regarding the appropriate form of metropolitan area government are based on the assumption that center cities and their suburbs are economically linked and that this relationship is durable over time. These policy recommendations include reducing local government fragmentation (Rusk 1993, Dreier Mollenkopf and Swanstrom 2001), promoting increased regional governance (Downs 1994, Barnes and Ledebur 1998), and increasing center city/suburb political coalitions (Orfield 1997, Dreier, Mollenkopf and Swanstrom 2001). Interestingly, advocates of each of these policy recommendations turn to the federal government as the appropriate level of government
to provide the necessary incentives to alter local government institutions and establish political coalitions (Rusk 1999, Dreier, Mollenkopf and Swanstrom 2001). With the exception of Orfield (1997), the state is generally ignored as a relevant policy actor.

Before local practitioners embrace these policy suggestions, it is important to know more about the economic relationship between center cities and their suburbs over time. Establishing an enduring economic relationship between center cities and their suburbs would provide a necessary (but not sufficient) condition for metropolitan area government cooperation. If cities and their suburbs fail to share an economic future, is it really necessary to alter existing structures of metropolitan area governments or organize center city/suburb political coalitions to promote regional economic growth?

There are several reasons to expect the economic relationship between center cities and their suburbs to persist over time. First, suburban governments formed as a result of their geographic proximity to the center city. By definition, there cannot be a suburb of nowhere. In addition, both the center city and its suburbs are at the mercy of the state economy. Both areas experience similar economic cycles, as a result of the larger state, national, and even international economies. Finally, both the center city and its suburbs comprise the market of local governments, which promotes intergovernmental cooperation while economically binding the market participants.

**Suburbs of Nowhere**

Many early suburban areas were established at the turn of the twentieth century by extremely wealthy citizens seeking the advantages of a rural lifestyle with access to the center city.⁸ Teaford (1997) argues that advances in transportation enabled wealthy

---

⁸ Not all suburbs were established to be wealthy residential areas. “Suburban governments sometimes provided industrialists with haven from taxes and regulation” (Judd and Swanstrom 2001: 289). Industry,
city residents to build lavish suburban estates while maintaining ties with the center city. These individuals often established small local governments to protect their investment and their aristocratic way of life. Their seclusion, however, was short-lived. During the 1920s, full-scale suburbanization began to take place as “members of the middle class joined the wealthy along the metropolitan outskirts, and three bedroom homes on quarter-acre lots encroached on hunt clubs and polo fields” (Teaford 1997: 12). Teaford (1997) contends that the middle and upper-middle class were seeking the same benefits as the extremely wealthy – escape from the center city, single family housing, land, low taxes, minimal services, and small “village” type local government. These items became the defining elements of the suburban ideal that endures today.

The suburbanization that started in the 1920s and 1930s exploded after World War II. Developers planned, built, and sold thousands of acres of new homes to American families. The attraction of the suburbs increased with the development of local shopping malls and the arrival of industry. The arrival of shopping malls in the suburbs improved the quality of life for residents. Expanded retail opportunities allowed individuals to do most of their shopping close to home and provided an increase in the local tax base (Teaford 1997, Dreier, Mollenkopf and Swanstrom 2001).

America’s obsession with the suburb continues today. Undeveloped land is being converted into new houses at a rate of 2 million acres per year, and the demand for affordable, new suburban housing appears to be constant (Mitchell 2001). Meeting the demand for new suburban housing is not without costs. America is losing a tremendous amount of valuable farmland. In addition, urban sprawl translates into more cars on the...
road, resulting in increased traffic congestion and pollution. These side effects are felt by all metropolitan area residents, not just the residents of the new suburban communities. Consequently, policymakers must reconcile the competing demands of consumers seeking affordable single-family housing with the overall economic and environmental needs of the entire metropolitan area.

The creation and expansion of suburbs has generated distinct patterns of population sorting and government policy behavior. Suburban residents are more likely to be white, educated, wealthy, and Republican than their center city counterparts. Likewise, center city residents are more likely to be black, under-educated, poor, and Democratic than their suburban counterparts (Burns 1994, Schneider 1980, Dreier, Mollenkopf, and Swanstrom 2001). These differences in center city and suburban residents are thought to translate into different policy preferences. Suburban residents often prefer low taxes over a wide variety of public services. They also have little use for redistributive services aimed at helping the poor (Miller 1981, Peterson 1981). In contrast, center city residents often demand a wide array of publicly provided goods and services that benefit a variety of income levels.

This pattern of segregation between cities and their suburbs is not universal. The extent of the status differences between center cities and their suburbs tends to vary systematically with at least three factors – age of the metropolitan region, size of the metropolitan area, and region of the country in which the metropolitan area is located. The income gap between center cities and their suburbs tends to be highest in older, large metropolitan areas located in the northern and midwestern sections of the country (Schneider 1980). In spite of these regional differences, an overwhelming majority of

growing suburban population” (Judd and Swanstrom 2001: 289).
center cities nationwide are demographically distinguishable from their suburban counterparts (Lowery 1998).

On the surface, it appears that center city and suburban governments have little incentive to cooperate. History indicates that most suburban communities were established by individuals leaving the center city in search of a rural lifestyle, homogeneous communities, and smaller, more manageable local governments. In addition, it is likely that the policy preferences of white, wealthy, Republican suburban residents differ from their minority, poor, Democratic counterparts in the center city.

Yet history also indicates that the location of most suburban areas stems from their geographic proximity to the center city. Suburbs were created to meet the demand of metropolitan area residents seeking to live outside the center city while maintaining access to it. A stereotypical suburban resident owns a home and shops in the suburbs, and works and attends sporting and cultural events in the center city. These individuals pump money into both the center city and suburban economies. Furthermore, they utilize goods and services, such as police and fire protection, provided by both governments. The fluid movement of individuals across center city and suburban boundaries intertwines the two areas economically and socially. The economic and social connections between center cities and their suburbs may induce them to cooperate in the provision of some goods and services, especially those that promote regional economic growth.

**Regional, State, and National Economy**

It is possible that the economic relationship between center cities and their suburbs is merely the result of their mutual location in the larger state or regional...
economy. Brace (1993) demonstrates that state economies are a function of a larger multi-state economic region, the national economy, and in some cases the international economy. His analysis concludes that the impact of state economic development policies on economic growth is limited at best. If state economies are a function of larger regional, national, and international economic forces, then it is logical to infer that local economies are a function of the state economy. Blair and Zhang (1994) support this conclusion. They argue that most empirical evidence of an economic relationship between center cities and their suburbs is merely an artifact of the larger state economy. They contend that controlling for the state economy dramatically decreases the significance of the economic relationship between center cities and their suburbs. Their empirical analysis confirms this hypothesis, suggesting that the state economy is the dominant force explaining this relationship. If Blair and Zhang’s conclusions are correct, then there is little incentive for local governments to cooperate, because their actions do not directly impact their economic future.

Blair and Zhang’s findings, however, have been challenged by Hill, Wolman, and Ford (1995) and Post and Stein (2000). Hill, Wolman, and Ford (1995) argue that Blair and Zhang’s analysis is flawed. They claim that using a state-level measure of changes in personal income to explain changes in suburban personal income is tautological, because a significant portion of the state variable is already included in the suburban variable. This is especially true in states with large metropolitan areas, such as Texas, New York, California, and Florida. Hill et al. argue that any state economic measure should be purged of the “contribution from the metropolitan area in question” (Hill, Wolman, and
Ford 1995: 161). This would provide a more accurate measure of the influence of the state economy on the economic relationship between center cities and their suburbs.

Post and Stein (2000) replicate Blair and Zhang's analysis and introduce Hill et al.'s (1995) measure of state per capita income. Using the new measure, they find that changes in center city per capita-income are significantly and positively related to changes in suburban per capita income independent of changes in the state economy. Their findings suggest that the economic bond between center cities and their suburbs is not merely an artifact of the larger state economy. The two areas share a unique economic bond that should provide a strong incentive for policy cooperation. In addition to the introduction of a new measure of change in the state economy, Post and Stein's analysis offers another important departure from previous research: They introduce an instrumental measure of change in center city per capita income in order to evaluate the direction of the economic relationship between center cities and their suburbs. Their findings suggest that changes in suburban per capita income are a function of changes in center city per capita income, which means the center city economy drives this relationship. This conclusion, however, is far from definitive. Further research is necessary to determine if changes in center city per capita income are a function of suburban per capita income or vice versa. Although this question merits further research, the immediate project is interested only in establishing an economic bond between center cities and their suburbs - not determining which economy is more important to the relationship.

---

9 They estimate the change in center city per capita income as a function of change in center city population, change in center city housing values, and change in center city retail sales.
Post and Stein’s (2000) conclusion that center cities and their suburbs share a unique economic bond is echoed by Barnes and Ledebur (1998). Although Barnes and Ledebur fail to control for the influence of the state economy, they argue that the economic link between cities and their suburbs is the basis for the larger state economy, rather than an artifact of it. They conclude that the economic relationships between center cities and their suburbs are actually “the building blocks of the three-tiered economic system – regional, national, and global” (Barnes and Ledebur 1998: 173). Their research indicates that local, state, regional, national, and global economies are linked from the bottom up, rather than from the top down.

Market Explanation

Some researchers believe that the structure of metropolitan area government influences the economic bond between center cities and their suburbs. As the number of metropolitan area governments increases, so does the economic disparity between center cities and their suburbs. High levels of income disparity are believed to impact metropolitan economic health adversely. Based on these hypothesized causal relationships, one frequently proposed solution for promoting regional cooperation and economic growth is altering the existing structures of metropolitan area government. The overall goal is to reduce the number of local governments or to create new regional governments with the authority to force existing local governments to cooperate. Rusk (1993) contends that the best way to promote regional economic health is to expand the political boundaries of the center city. This can be accomplished through annexation or consolidation. He argues that cities with elastic borders are healthier than cities with inelastic borders. According to Rusk it is important to maintain and improve the
economic health of the center city because it is the economic engine of the metropolitan area. An economically healthy center city translates into an economically healthy metropolitan area.

Promoting center city economic health to the exclusion of other metropolitan area governments, however, may not achieve the optimal level of metropolitan area economic growth. Barnes and Ledebur (1998) recognize that the economy fails to acknowledge political boundaries. Cities and their suburbs exist in a larger regional economy that impacts multiple areas. The boundaries of these regional economies are fluid. They contend the best way to promote city and suburb economic growth is through regional solutions aimed at promoting cooperation among metropolitan area governments. Downs (1994) takes Barnes and Ledebur one step further. He argues that the best way to regulate urban sprawl and promote regional economic health is through regional governments that have the power to impose their will on existing local governments. These regional governments should be charged with promoting the economic interest of the entire metropolitan area, rather than that of any single local government.

These calls for less local government are based on the assumption that the key to promoting regional economic health is reducing the income disparity between urban and suburban areas. Economic disparity between center cities and their suburbs is a function of metropolitan area population sorting. If the wealthy sort themselves into suburban enclaves and leave the center city to the poor, the economic gap between the two areas will grow. Metropolitan areas with lower levels of income disparity are thought to be economically stronger.
Tiebout's (1956) market model of local government competition explains why metropolitan area residents sort themselves into homogenous groups. He argues that individuals select among communities in a metropolitan area in accordance with their preferences for publicly provided goods and services, by "voting with their feet". An efficient market mechanism for the provision of local goods and services exists by virtue of (1) the number and presumed diversity of metropolitan communities, and (2) the mobility of voters, which allows individuals to choose the community that best approximates their preferences. The result is a set of homogeneous metropolitan communities, each producing differentiated service bundles. Implicit in Tiebout's model is the premise that the greater the number of local governments, the easier it is for white, wealthy metropolitan area residents to exit the center city.

Buchanan (1971), Peterson (1981), and Miller (1981) demonstrate that the mobility of taxpayers in a metropolitan area produces competition among local governments and a significant bias for the retention of wealthier residents. Buchanan demonstrates that collective decision making under majority rule with equality of consumption and taxation (i.e., head taxes) will advantage low-income families at the expense of the high-income residents. If wealthy-residents believe that they are not benefiting from local government policies or that local government policies are imposing a cost on them, they will leave that area for another government that meets their policy preferences. This generally results in emigration of high-income residents from the center city.

In spite of the strong assertion that local government fragmentation exaggerates the income disparity between cities and their suburbs, little systematic, empirical research
exists that fully examines this relationship. Most research in this area relies largely on anecdotal evidence (Rusk 1993, Dreier, Mollenkopf, and Swanstrom 2001). Chapter 4 remedies this omission in literature by empirically examining the relationship between metropolitan area government structure and center city/suburb income disparity. This chapter addresses the potential relationship between local government structure and city/suburb economic dependence. It asks whether the structure of metropolitan area government (i.e. fragmented versus consolidated) impacts the economic relationship between center cities and their suburbs.

Implicit in many of the recent calls for consolidated metropolitan area government is the assumption that consolidated local government leads to a stronger economic tie between center cities and their suburbs. If that is true, local governments in highly fragmented areas should be less likely to be economically linked. Post and Stein (2000) provide the only empirical test of this hypothesis. They find the structure of local government has no impact on the center city/suburb economic relationship. Thus, center cities and their suburbs share a strong economic bond regardless of the structure of metropolitan area government. It is possible, however, that their non-findings were an anomaly related to the time period of their study. They only examined the relationship between 1979 and 1989. Perhaps a longer time series study would reveal that the structure of metropolitan area government does have a direct impact on city/suburb economic ties.
Hypotheses

Several testable hypotheses can be derived from the proceeding literature. First, the center city and its suburbs share a common economic bond. The two areas are economically joined. Specifically, changes in center city per capita income are significantly and positively related to changes in suburban per capita income. Second, this relationship is thought to justify the need for increased regional cooperation among local governments - the fewer the number of local governments within a metropolitan area the stronger the economic bond between center cities and their suburbs. Third, the economic tie between center cities and their suburbs exists independent of the larger state economy. Blair and Zhang (1994) argue that the economies of center cities and their suburbs are not directly linked, but rather an artifact their location in the larger state economy. In contrast, Post and Stein (2000) find that when the impact of the state economy is properly measured, there is a strong, positive economic relationship between center cities and their suburbs. Finally, all of these relationships should exist over time. Although most of the empirical research to date is limited to data from 1980 to 1990, implicit in all of the conclusions is that their findings are not time sensitive.
Research Design, Data, and Operational Measures

These hypotheses are tested over two decades (1969 to 1989) using data for 150 metropolitan statistical areas with populations greater than 250,000 in 1990. Census data from the *County and City Data Books 1977, 1983, 1988, 1994* and the *Census of Governments 1987, 1992* are used.\(^{10}\)

The first analysis replicates previous research regarding the economic relationship between center cities and their suburbs with the addition of one extra decade of data.\(^{11}\)

The change in suburban per capita income is examined as a function of the change in center city per capita income. This ordering of the relationship was selected to mirror

---

\(^{10}\) This sample of MSAs was selected for two reasons: (1) most previous research regarding the economic relationship between center cities and their suburbs focuses on large MSAs, and (2) the larger MSAs tend to be more stable over time. Smaller MSAs are more likely to be new, making it difficult to fully assess this relationship across time.

It should be noted that several MSAs meeting the population criteria were excluded for other reasons. First, census data was not available for the center city of some MSAs. This omission was problematic, because the suburb variables were created by subtracting the center city data from the metropolitan area data. Second, many of the New England MSAs failed to meet conventional county definitions. Most MSA definitions are based on counties, but New England MSAs are defined using townships; consequently, these MSAs may include portions of numerous counties. This anomaly makes it difficult to compare the New England states to other states.

Finally, MSAs are defined using 1999 Census definition of metropolitan areas. The same counties and center cities are examined in each decade, even if the census MSA definition was revised during that period. For example, in 1970 the Houston MSA includes five counties, whereas in 1999 the Houston MSA included six counties. For purposes of this analysis, the Houston MSA was defined using six counties for 1969-1990.

\(^{11}\) This relationship is examined between 1970 and 1980 and 1980 and 1990. It would be examined over a longer period of time but per capita income data for the center city and the metropolitan area are not available for both the center city and the MSA county components until 1970. It is necessary to have data for both geographic units in order to construct measures of suburban per capita income. Other measures (such as new housing starts and retail sales) are more readily available over time, but they fail to tap the economic link between center cities and their suburbs adequately.
previous research by Blair and Zhang (1994), Barnes and Ledebr (1998), and Post and Stein (2000). The goal of this analysis is to determine if the two areas are linked; if the two areas are linked then the incentive for local government coordination increases. It is important to highlight, that this analysis does not address questions of causation. The question is not whether changes in center city per capita income lead to changes in suburban per capita income or vice versa. Rather, the goal is to determine if the two areas are linked. Barnes and Ledebr (1998) best explain the goal of this analysis: “The relationship [change in suburban and center city per capita income] does not imply causation - that is, that change in one causes a change in the other. Rather, the relationship is mutual, interactive, and interdependent” (Barnes and Ledebr 1998:42). It is the interdependence of the two areas that provides a strong motivation for local government cooperation. Factors influencing local government cooperation are examined in depth in Chapter 5.

The second analysis examines the role of the state economy on the economic relationship between center cities and their suburbs. Two measure of the change in state per capita income are examined. The first measure replicates Blair and Zhang (1994) and is the rate of change in state per capita personal income. But this measure is defective because it includes information for the metropolitan area under study. Ideally, any measure of the state economy should not include information for the metropolitan area being examined (Hill, Wolman, and Ford 1995). The second measure comes from Hill et al. (1995) and Post and Stein (2000). It corrects the problem by purging the data of any contribution from the relevant metropolitan area. Thus this measure of change in state
per capita personal income does not include data for the metropolitan area under consideration.\textsuperscript{12}

The final analysis examines the mediating effect government fragmentation has on center city/suburb economic dependence. It evaluates whether the structure of metropolitan area government (i.e. fragmentation versus consolidation) influences the economic relationship between center cities and their suburbs. The general assumption in the literature is that fewer metropolitan area governments make it easier to coordinate local government activities and to promote regional economic health. If that is true, then the fewer the number of local governments the more likely center cities and their suburbs will be economically bound.

The empirical analysis includes two measures of metropolitan area government structure. The first is the total number of general purpose governments per 10,000 population. This is considered to be the conventional measure of government fragmentation, and it is used by Oakerson (1987) and others. It is designed to control for

\textsuperscript{12}The calculations for the change in per capita state income net of metropolitan area income:

\[ \Delta StINC_i = \left[ \frac{\{StINC_{yr2} - MINC_{yr2}\}}{\{StPOP_{yr2} - MPOP_{yr2}\}} - \frac{\{StINC_{yr1} - MINC_{yr1}\}}{\{StPOP_{yr1} - MPOP_{yr1}\}} \right] / \frac{\{StINC_{yr1} - MINC_{yr1}\}}{\{StPOP_{yr1} - MPOP_{yr1}\}} \]

Where:

\[ \Delta StINC_i = \text{growth rate in per capita personal income between 1969-1979 and 1979-1989 for the } i^{th} \text{ state} \]

StINC\textsubscript{yr2} = total state personal income at 1989, 1979 for the \( i^{th} \) state

StINC\textsubscript{yr1} = total state personal income at 1979, 1969 for the \( i^{th} \) state

MINC\textsubscript{yr2} = total personal income at 1989, 1979 or the \( i^{th} \) metro area

MINC\textsubscript{yr1} = total personal income at 1979, 1969 for the \( i^{th} \) metro area

StPOP\textsubscript{yr2} = total population at 1980, 1990 for the \( i^{th} \) state

StPOP\textsubscript{yr1} = total population at 1970, 1980 for the \( i^{th} \) state

MPOP\textsubscript{yr2} = total population at 1980, 1990 for \( i^{th} \) metro area

MPOP\textsubscript{yr1} = total population at 1970, 1980 for \( i^{th} \) metro area
variations in population size across metropolitan areas, allowing for more accurate comparisons across metropolitan areas. The second is the total number of general purpose governments per square mile. It accounts for the geographic density of metropolitan area governments.

Both measures provide some information about the relative ease with which the metropolitan area population can sort themselves into homogeneous communities. Population sorting based on race and income should increase as the number of local governments per 10,000 population and per square mile increase. The density measure provides additional information about the economic and social ties between center cities and their suburbs. An increase in the number of local governments per square mile makes it easier for metropolitan area residents to live, work, and recreate in both the suburbs and the center city, thus strengthening the social and economic bond between center cities and their suburbs.

The models also include two interaction terms. The first interacts the per capita number of governments with the change in center city per capita income. The second interacts the geographic density of metropolitan area governments with the change in center city per capita income. These interaction terms are necessary to determine whether metropolitan area government fragmentation impacts the relationship between changes in urban and suburban per capita income. Without the interaction terms, the analysis would be limited to determining if metropolitan area government structure impacts changes in suburban per capita income. It would tell us little about the effect of local government structure on the economic relationship between center cities and their suburbs.
Finally, dummy measures were constructed to control for regional variations. Previous research suggests that center city/suburb relations vary dramatically by region. This analysis finds that center cities and their suburbs share an economic bond regardless of region. None of the regional dummies were consistently significant across any of the explanatory models. Nor did any of the regional dummies improve the fit of the model or change the size and direction of the coefficients of the other explanatory variables. Consequently, the results of this analysis are reported in an appendix.

Findings

Tables 1 and 2 report the regression estimates for the change in suburban per capita income between the years 1969-1979 (models 1a-5a) and 1979-1989 (models 1b-5b) for metropolitan areas with a 1990 population greater than 250,000. Models 1a and 1b replicate the work of previous researchers and confirm their findings. Changes in center city per capita income are positively and significantly related to changes in suburban per capita income. This relationship is consistent across time.

Models 2a and 2b replicate Blair and Zhang's (1994) model of urban/suburban economic dependence by including a variable for change in state income. The findings reflect those of Blair and Zhang. The introduction of the state income variable diminishes the magnitude of the estimate for change in center city per capita income. The variable remains highly significant, but its overall impact decreases from 72% to 49% in the 1970s and from 69% to 40% in the 1980s. Models 3a and 3b introduce the measure of change in state per capita income used by Post and Stein (2000). It excludes the relevant metropolitan area's change in per capita income from the change in state per capita income. Both independent regressors in models 3a and 3b are statistically significant, but
Table 3-1
Regression Estimates for the Change in Suburban Per Capita Income: 1969-1979 (t-value)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1a</th>
<th>Model 2a</th>
<th>Model 3a</th>
<th>Model 4a</th>
<th>Model 5a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.17***</td>
<td>.10***</td>
<td>.12***</td>
<td>.17***</td>
<td>.15***</td>
</tr>
<tr>
<td></td>
<td>(11.50)</td>
<td>(4.30)</td>
<td>(5.19)</td>
<td>(4.58)</td>
<td>(4.58)</td>
</tr>
<tr>
<td>Change in center city per capita income</td>
<td>.72***</td>
<td>.49***</td>
<td>.58***</td>
<td>.35**</td>
<td>.48***</td>
</tr>
<tr>
<td></td>
<td>(11.70)</td>
<td>(5.86)</td>
<td>(7.35)</td>
<td>(2.36)</td>
<td>(3.65)</td>
</tr>
<tr>
<td>Change in state per capita income</td>
<td></td>
<td>.43***</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.83)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in state per capita income net of msa</td>
<td></td>
<td></td>
<td>.28**</td>
<td>.28**</td>
<td>.29**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2.81)</td>
<td>(2.75)</td>
<td>(2.87)</td>
</tr>
<tr>
<td>Local Government Fragmentation</td>
<td></td>
<td></td>
<td></td>
<td>-0.08</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-1.66)</td>
<td></td>
</tr>
<tr>
<td>Fragmentation * change in cc income</td>
<td></td>
<td></td>
<td></td>
<td>.41</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.86)</td>
<td></td>
</tr>
<tr>
<td>Local Government Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-1.43</td>
</tr>
<tr>
<td>Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-1.16)</td>
</tr>
<tr>
<td>Density * change in cc income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.69)</td>
</tr>
<tr>
<td>R-square</td>
<td>.48</td>
<td>.52</td>
<td>.50</td>
<td>.51</td>
<td>.50</td>
</tr>
<tr>
<td>N</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01, ***P < .001
Table 3-2
Regression Estimates for the Change in Suburban Per Capita Income: 1979-1989 (t-value)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1b</th>
<th>Model 2b</th>
<th>Model 3b</th>
<th>Model 4b</th>
<th>Model 5b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.09***</td>
<td>.02*</td>
<td>.03**</td>
<td>.05**</td>
<td>-.00</td>
</tr>
<tr>
<td></td>
<td>(9.43)</td>
<td>(2.03)</td>
<td>(3.06)</td>
<td>(2.50)</td>
<td>(-.004)</td>
</tr>
<tr>
<td>Change in center city per capita income</td>
<td>.69***</td>
<td>.40***</td>
<td>.49***</td>
<td>.50**</td>
<td>.60***</td>
</tr>
<tr>
<td></td>
<td>(11.32)</td>
<td>(6.29)</td>
<td>(7.84)</td>
<td>(4.60)</td>
<td>(5.85)</td>
</tr>
<tr>
<td>Change in state per capita income</td>
<td></td>
<td>.62***</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7.57)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in state per capita income net of msa</td>
<td></td>
<td></td>
<td>.50**</td>
<td>.49**</td>
<td>.49***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(6.44)</td>
<td>(6.21)</td>
<td>(6.53)</td>
</tr>
<tr>
<td>Local Government Fragmentation</td>
<td></td>
<td></td>
<td></td>
<td>-.02</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.79)</td>
<td></td>
</tr>
<tr>
<td>Fragmentation * change in cc income</td>
<td></td>
<td></td>
<td></td>
<td>-.07</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.27)</td>
<td></td>
</tr>
<tr>
<td>Local Government Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.06***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3.05)</td>
</tr>
<tr>
<td>Density * change in cc income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-5.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-1.12)</td>
</tr>
<tr>
<td>R-square</td>
<td>.46</td>
<td>.61</td>
<td>.58</td>
<td>.58</td>
<td>.60</td>
</tr>
<tr>
<td>N</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01, ***P < .001
the influence of the state is reduced by about 10%, while the influence of the center city is increased by roughly the same amount. Removing the colinearity between the state and center city measures of change in per capita income demonstrates that the center city economy has a strong impact on the suburban economy even when controlling for the effect of the larger state economy.

One interesting finding from all of the change in state per capita income explanatory models (Models 2a, 2b, 3a, and 3b) is that the impact of the state economy on metropolitan area economic growth has grown substantially stronger over time. The coefficients for the change in the state economy were almost 20% higher in the 1980s than they were in the 1970s. Likewise, the coefficients for the change in center city per capita income were about 10% lower in the 1980s than they were in the 1970s.

A combination of events that took place in the 1980s may help explain this finding. First, the federal government dramatically decreased the amount of federal dollars flowing into the center city during the 1980s.

In 1980, federal dollars accounted for 22 percent of big-city (over 300,000 population) budgets; by 1989, federal aid was only 6 percent. State governments did not step in to fill the gap, as the president said they would. State aid constituted 16 percent of city budgets in 1980 and remained the same nine years later (Dreier, Mollenkopf, and Swanstrom 2001: 127).

As the federal money flowing into the big cities decreased, so did city budgets and overall expenditures. Thus the state economy exerted a stronger influence on metropolitan area economies. Second, the Republicans launched the devolution revolution during the 1980s. They gave significant power back to the states, making them responsible for a wide range of policies that had previously been handled by the federal government. The states were granted a more significant role in the development
and implementation of a large number of policies that directly impacted metropolitan areas. Finally, the state's role in economic development policy dramatically increased during the 1980s. Brace (1993) states “that the Reagan era brought about a new economic era for the American states, one where state-level forces have come to play an increasing role in shaping growth in per capita personal income” (Brace 1993: 86).

Models 4a/5a and 4b/5b introduce one of two measures of metropolitan area government structure: fragmentation (the number of governments per 10,000 population within a metropolitan area) and density (the number of governments per square mile within a metropolitan area). These models also include one of two interaction terms: fragmentation multiplied by center city per capita income, and density multiplied by center city per capita income. The interaction terms are the variables most relevant to this study, as they directly evaluate the influence of metropolitan area government structure on the economic relationship between center cities and their suburbs.

The findings indicate that the economic link between center cities and their suburbs is largely unaffected by the structure of metropolitan area government. With the exception of the density variable in 1979-1989 (model 5b), none of the fragmentation, density, or interaction variables are significant. It appears that center cities and their suburbs are economically tied regardless of the structure of metropolitan area government. This relationship is largely expected, as suburban governments in both fragmented and consolidated metropolitan areas were established based on their proximity to the center city. And metropolitan area residents live, work, and recreate across multiple communities, in both fragmented and consolidated areas, albeit to different degrees.
The one significant finding in this set of analysis has some interesting implications. In the 1980s, an increase in the geographic density of metropolitan area governments led to a significant increase in suburban per capita income.\textsuperscript{13} Yet in the 1970s, this relationship was negative and insignificant. One explanation for the significant finding in the 1980s is that suburban communities gained population and wealth at a faster rate in the 1980s than they did in the 1970s. Thus, the economic power of suburban governments relative to center city governments grew in the 1980s. Part of this shift in power may be attributable to the geographic density of metropolitan area governments. Chapter 4’s detailed examination of the economic disparities between center cities and their suburbs should provide some insight into this finding.

Overall these findings confirm an economic tie between the center city and its suburbs. They confirm Barnes and Ledebur’s (1998) assertion that the economic relationship between center cities and their suburbs is “mutual, interactive, and interdependent”. In other words, the economic health of one area impacts the other. It is difficult to determine the direction of this relationship, because changes in the center city economy and changes in the suburban economy impact each other simultaneously.\textsuperscript{14} Thus, it is in the mutual interest of both areas to cooperate.

\textsuperscript{13} The initial estimates for the density of metropolitan area government and its interaction with the change in per capita center city income were statistically significant and signed in the positive direction. Upon further inspection, however, it was determined that these results were driven by one case - the Jersey City, New Jersey MSA - that was a significant outlier on the density measure. Removal of this case from the analysis produced insignificant estimates for the interaction measure of density and change in per capita center city income.

\textsuperscript{14} This analysis does not indicate a direction of causation between the two areas. Post and Stein (2000) use an instrumental measure of the change in center city per capita income to account for this problem. Their findings suggest that the direction of causation flows from the center city to the suburb, but the difficulty of constructing a perfect
Discussion

This analysis confirms previous research that concludes the economies of center cities and their suburbs are linked (Barnes and Ledebur 1998; Savitch et al. 1992; Voith 1992, 199; Post and Stein 2000). It also contributes several additional insights into this relationship. First, this relationship exists across time. Previous studies have focused on one decade of analysis (1980-1990). This study provides an additional decade of analysis (1970-1980). This expansion across time demonstrates that this relationship is constant, which should influence the policy decisions of local governments. It is in the interest of both center cities and their suburbs to coordinate economic development activities and other relevant policy decisions.

Further evidence that the two areas should coordinate their economic development activities is that the economic relationship between center cities and their suburbs is not simply an artifact of the larger state economy. The state economy plays a significant role in this relationship, but it is not the sole determinant of it. Consequently, local policy decisions have the potential to significantly influence the economic future of the metropolitan area.

However, local governments do not exert as much influence over their economic future as they did in prior decades. The influence of the state economy on the center city/suburb economic bond has grown demonstrably stronger over time. This trend could indicate that economies in general are becoming increasingly global and that soon the center city/suburb economic relationship will be an artifact of the larger state, national,

instrumental measure makes it difficult to determine the direction of the center city/suburb economic relationship definitively. Furthermore, their findings do not eliminate the possibility that, in some cases, the suburbs rather than the center city are the economic engine of the metropolitan area.
and global economy. These findings could also be an aberration. It will be interesting to evaluate this relationship further as the 2000 Census data become available.

The final evidence that it is in the interest of center cities and their suburbs to coordinate their policy activities is the lack of a significant relationship between metropolitan area government structure and center city/suburb economic ties. This finding indicates that local governments in both fragmented and consolidated metropolitan areas are economically linked and that this bond is not a result of metropolitan area government structure (fragmentation and density).

It is possible, however, that the structure of metropolitan area government influences other aspects of the center city/suburb economic relationship. Chapter 4 examines the relationship between metropolitan area government structure (fragmentation and density) and the income disparity between center cities and their suburbs. It asks if metropolitan area government structure influences the ratio of center city to suburban per capita income and if so, in what direction? It then examines the impact center city and suburban income disparity exerts on metropolitan area economic growth. Chapter 5 investigates the relationship between metropolitan area government structure and local intergovernmental agreements. It seeks to identify conditions that promote local government cooperation. The findings presented in this chapter set the stage for Chapters 4 and 5. They demonstrate that center cities and their suburbs share a strong economic bond that should create an incentive for local government cooperation.
Chapter 4

Center City/Suburb Economic Disparity and Regional Economic Growth

As chapter 3 establishes, center cities and their suburbs share an economic bond. This link exists independent of the larger state and regional economy and has grown stronger over time. This finding, however, provides limited information about the scope and nature of the center city/suburb economic relationship. It does not tell us if one area is economically stronger or weaker than the other, nor does it tell us if the economic relationship between the two areas has implications for overall metropolitan area economic health. The next step to fully understanding center city/suburban economic relations is to examine the direction and magnitude of this relationship. Are center cities or their suburbs more likely to have higher per capita incomes? Is the income gap between the areas growing? If so, what explains this growing economic disparity? Finally, what are the social and economic implications of that income disparity?

The dominant answers to these questions are that suburban per capita income generally exceeds center city per capita income and that income disparity between the two areas is growing. This growing disparity is attributed to rampant suburban sprawl, which is contributing to the continued flight of productive capital and labor from the center city. The widening income gap between center cities and their suburbs is thought to be an important predictor of slower metropolitan area economic growth and increased social pathologies, such as crime and health problems. One important institutional structure believed to exaggerate income disparities between center cities and their suburbs is the number of general purpose governments within a metropolitan area. The prevailing assumption is that, as the number of local governments within a metropolitan
area increases, so do the number of opportunities for individuals to leave the center city. Those remaining in the center city are generally too poor to leave. Thus, metropolitan areas with highly fragmented local governments are more likely to see residents sort themselves based on income and race.

Surprisingly, little empirical research directly examines this series of relationships. A few scholars have examined the relationship between metropolitan area government fragmentation and center city/suburban income disparity empirically, but the findings are mixed due to variations in the number and type of metropolitan areas studied, as well as variations in the definition of fragmentation. Most of the research on the relationship between center city/suburb income disparities and metropolitan area economic growth is limited to anecdotal studies of a few metropolitan areas.

This chapter seeks to fill this void in the literature by empirically addressing three important questions: First, is the structure of metropolitan area local government related to center city/suburban income disparities? Second, does the economic disparity between center city and suburban per capita income influence metropolitan area economic growth? Finally, does the direction of this disparity (i.e., whether the city’s per capita income leads or lags its suburbs) have an independent effect on metropolitan area economic growth? All of these questions are answered using Census data from 1969 to 1990 for 152 metropolitan areas with populations over 250,000.

This chapter has four sections. The first reviews the previous literature regarding center city/suburb income disparities. It examines the direction and magnitude of center city/suburb income disparities and the potential causes and consequences of those disparities. The second section outlines testable hypotheses derived from previous
research and provides a description of the data and research design. The final two sections review the empirical findings and discuss their implications.

Center City/Suburb Income Disparity

Center City/Suburban Income Disparity Over Time

Suburban wealth has steadily increased over time. This increase has widened the income gap between center cities and their suburbs. Table 4-1 provides a brief summary of the changes in the disparity between center city and suburban per capita income between 1970 and 1990. The data are based on 152 metropolitan statistical areas with populations over 250,000. The variable of interest was created by subtracting suburban per capita income from center city per capita income in three decades. This simple gap measure provides interesting information regarding the evolution of the economic relationship between center cities and their suburbs. It is important to note that a negative dollar amount indicates that suburban per capita income exceeds center city per capita income and a positive number indicates that center city per capita income exceeds suburban per capita income. Thus, the minimum number indicates the extreme case where suburban per capita income exceeds center city per capita income and the maximum number indicates the extreme case where center city per capita income exceeds suburban per capita income.

A closer examination of both income disparity extremes reveals a distinct regional bias among cites at the extremes of center city/suburb income disparities. Industrial metropolitan areas such as Newark, Trenton, Cleveland, New York, Detroit, and Baltimore are consistently among the top ten areas where suburban per capita income exceeds center city per capita income in 1970, 1980, and 1990. Less industrial, Southern
metropolitan areas such as Charleston, Little Rock, and Lafayette are consistently among the top ten areas where center city per capita income exceeds suburban per capita income in 1970, 1980, and 1990.

Although the metropolitan areas dominating both disparity extremes remain constant, the overall picture of center city/suburb disparity has noticeably changed over time. Suburban wealth has steadily increased relative to center city wealth across all metropolitan areas. In 1970, only 42% of the metropolitan areas in the sample had suburban per capita incomes larger than center city per capita incomes. That number grew to 62% in 1980 and 67% in 1990. It appears that center city residents are consistently losing economic ground to their suburban counterparts. Not only do an overwhelming majority of metropolitan areas have suburban per capita incomes higher than center city per capita incomes, but the overall income gap between the two areas is growing. This is evidenced by the steadily increasing standard deviations between 1970 ($1565) and 1990 ($3180). This doubling of the standard deviation indicates that the variation around the mean is getting greater and that center cities and their suburbs are moving away from economic parity.

The causes and consequences of this increased income gap are the subject of much urban research. It is widely believed that increasing income disparity between center cities and their suburbs results in significant social and economic costs for the entire metropolitan area. The causes and consequences of center city/suburban income disparity are assessed in the following sections.
### Table 4-1

difference between
center city per capita income and suburban per capita income

<table>
<thead>
<tr>
<th>% of cases where suburban pc income larger than center city pc income</th>
<th>1970</th>
<th>1980</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.1%</td>
<td>62.3%</td>
<td>67.3%</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>-$5,464</td>
<td>-$7,848</td>
<td>-$12,129</td>
</tr>
<tr>
<td>Maximum</td>
<td>$4,391</td>
<td>$3,841</td>
<td>$4,350</td>
</tr>
<tr>
<td>Mean</td>
<td>$204</td>
<td>-$682</td>
<td>-$1457</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>$1,565</td>
<td>$2,134</td>
<td>$3,180</td>
</tr>
</tbody>
</table>

Sample: 152 MSAs with populations greater than 250,000. All data are 1989 constant dollars.

Minimum Numbers (negative) indicate suburban per capita income greater than center city per capita income.

Maximum Numbers (positive) indicate center city per capita income greater than suburban per capita income.
Causes of Center City/Suburban Income Disparity

The steady rise in suburban per capita income relative to center city per capita income has been attributed to a variety of factors. These include the structure of metropolitan area government (i.e. fragmented versus consolidated), land use control policies implemented by those local governments, federal policies targeted at urban areas, racial discrimination, and differences in demand for suburban and urban labor. A combination of these items is believed to have caused and entrenched disparities among urban and suburban incomes.

Metropolitan area government structure – fragmentation versus consolidation

A long-standing argument in local government research is that the structure of metropolitan area government has a significant impact on the magnitude of the income gap between center cities and their suburbs. An increase in the number of local governments within the metropolitan area is believed to exaggerate this income disparity. As the number of local governments within a metropolitan area increases, so do the options for metropolitan area residents. Individuals are able to compare communities based on attributes such as schools, housing values, crime rates, and property taxes (Weiher 1991, Percy and Hawkins 1992, Stein and Bickers 1995). Individuals with the resources to do so generally move to communities that optimize their preferences for these community attributes (Tiebout 1956). In most cases, this comparison shopping among local communities leads upper and middle-class metropolitan area residents to the suburbs (Peterson 1991).

Previous research into the relationship between fragmentation and economic disparity has generated mixed results. Hill (1974) offered one of the first empirical tests
of this relationship. He found family income disparities were higher in fragmented metropolitan areas than in non-fragmented metropolitan areas. Neiman 1976 criticized Hill’s interpretation of the dependent variable. He claimed that differences in family income are not a good measure of service inequalities across cities.

Several other studies have examined the relationship between metropolitan area government fragmentation and center city/suburban income disparities. Logan and Schneider (1982) measure fragmentation as the number of suburbs per 1,000 residents. They fail to find a statistically significant relationship between fragmentation and the ratio of center city/suburb median family household income. Bollens (1986) also fails to find a significant relationship between center city-suburban income disparity and fragmentation. He measures fragmentation as the number of non-center cities with populations over 10,000 per 100,000 residents. Most recently, Morgan and Mareschal (1999) examine the relationship between center city/suburb per capita income disparity and fragmentation. Income disparity is measured as the ratio of center city to suburban per capita income, and fragmentation is measured as the number of municipalities of more than 10,000 population per 100,000 residents. Like previous research, they fail to find a significant relationship between local government fragmentation and metropolitan area income disparity.

One possible explanation for the lack of a relationship between center city/suburb income disparity and metropolitan area government fragmentation is that the number of governments per capita is not the appropriate conceptualization of fragmentation. It is possible that the spatial relationship among local governments in highly fragmented areas
is more important than the total number of governments in explaining center city/suburb
income disparity. The geographic density of metropolitan area governments should play
a significant role in the residential sorting of the local population. This is because an
increase in the number of local governments per square mile decreases the costs of
moving outside the center city. Commuting times and transportation expenses decrease.
Individuals of all income levels may be even more inclined to exit the center city if they
can minimize the costs of commuting back to the center city for work and recreation.

This chapter examines the relationship between metropolitan area government
structure and center city/suburb income disparities. It examines a traditional measure of
fragmentation (i.e., number of local governments per 10,000 population) as well a
geographic density measure of fragmentation (i.e., the total number of local governments
per square mile). An increase in the geographic density of metropolitan area
governments may lead to increased center city/suburb income disparities.

Land use controls, federal policies, and racism

Many suburban communities were established to meet the demand for minimal
government services, low taxes, and racial and economic homogeneity (Miller 1981,
Burns 1984). Each time a local government is established an individual or a group of
individuals must undertake the collective action costs of forming a new government.
State laws determine who has the incentive and resources necessary to incur the costs of
government formation (Burns 1994). State laws regulating new government formation
vary from the relaxed (requiring a petition signed by a majority of property owners in the
area) to the restrictive (specific state legislation). The more difficult/complex the state
laws governing local government incorporation, the higher the collective action costs.
Groups and individuals with the incentive to incur the costs include county residents seeking to avoid annexation by a larger city (Miller 1981) and businesses and developers seeking access to the powers of local government (Burns 1984). Business owners often want to ensure low taxes and the provision of basic services, while developers want access to powers that facilitate their objectives, such as taxing and spending powers and the power of eminent domain.

Low taxes and cost-effective government are not the only motivation for local government formation. Many local governments were established to ensure economic and racial homogeneity. In the first half of the twentieth century, overtly racist policies ensured community homogeneity. Many suburban communities adopted “restrictive covenants” that prevented the sale of property to blacks, Jews, and other minority/low-income groups. These restrictions prevented minority families from moving into many suburban communities even if they had the income to do so. Black home ownership was further restricted by federal mortgage policies that did not insure loans for blacks, and which reduced the value of loans for property located in or near predominantly minority areas (Drier, Mollenkopf, and Swanson 2001). This combination of local and federal policies often forced minorities to rent rather than own, preventing them from accumulating wealth in their home or taking advantage of the federal mortgage interest tax deduction.

Once these racist “restrictive covenants” were deemed illegal, suburban governments were able to continue excluding low-income and minority residents by adopting zoning policies that required a minimum lot size or house size. In addition, they often adopted policies that prevented the construction of high density, multi-family
housing. The lack of affordable housing effectively frustrated poor citizens' attempts to leave the center city (Drier, Mollenkopf, and Swanstrom 2001).

Drier, Mollenkopf, and Swanstrom (2001) argue that the federal government further influenced suburban development through its aggressive highway program. During the 1920s and 1930s, the automobile, trucking, rubber, steel, and road-building industries won congressional support for automobile transportation over mass transportation which resulted in low gas taxes and an aggressive highway building program. These programs set into a motion a car-based society, with limited public transportation options that favored the wealthy over the poor. The supremacy of the car and the suburbanization of America were solidified with the federal Interstate Highway and Defense Act of 1956. Although the purpose of this act was to promote mobility across the country and evacuate Americans quickly from crowded cities in time of war, it also promoted suburbanization by making it easier to leave and return to the center city. The federal Interstate Highway and Defense Act also ensured future road construction through the Highway Trust Fund, which used federal gas tax revenues to pay 90 percent of freeway construction costs (Dreier, Mollenkopf, and Swanstrom 2001: 103-104).

Developers also benefited from the federal highway policies. Federal highway construction programs provided the infrastructure necessary to access undeveloped land surrounding the city. This easy access to the city’s hinterland provided developers the incentive to incur the collective action costs of establishing new local governments. These newly formed governments provided the developers access to the powers of local government necessary to build the community’s physical infrastructure, such as water, sewage, and local roads (Burns 1994). By incurring the costs of government building,
developers were able to meet demands for economically and racially segregated, single-family housing outside the center city.

It appears that a combination of federal, local, and state policies encouraged suburban sprawl. These policies often favored the interests of the wealthy suburban residents over the poorer center city residents. The intended (and unintended) consequences of these policies were to establish, entrench, and in some cases exaggerate the income disparity between center cities and their suburbs.

**Elasticity of the local labor market**

One way these policies magnified the income disparity between center cities and their suburbs is by creating two distinct work forces (Hill and Wolman 1997a; 1997b). The suburban workforce is better educated and more responsible when compared to its center city counterpart. Hill and Wolman (1997a 199b) argue that differences in workforce composition mean that demand for suburban labor is elastic, whereas demand for urban labor is inelastic. Thus, during periods of economic expansion, demand for suburban labor increases; at the same time, demand for center city labor remain constant. These differences in labor demand are one reason center city and suburban income disparity continues to grow even during periods of economic expansion. Consistent differences in labor demand mean that periods of high economic growth may actually widen center city/suburban income disparities rather than reduce them.

**Consequences of Center City/Suburb Income Disparity**

It appears that a combination of federal, state, and local laws contributed toward establishing, entrenching, and expanding the income disparity between center cities and their suburbs. But what are the consequences of increased income disparity? Do income
disparities between center cities and their suburbs positively or negatively impact the
social and economic health of the metropolitan area?

A great deal of urban research suggests that center city/suburban income disparity
is inherently bad. Wide income disparities are thought to indicate high levels of
concentrated poverty in the center city, which is thought to produce social pathologies as
well as slower metropolitan area economic growth (Rusk 1993, Barnes and Ledebr
1998, Dreier, Mollenkopf, and Swanstrom 2001). The social problems associated with
poverty are well documented: low education levels, poor health, high crime rates, and
high levels of unemployment. These problems are magnified when poverty becomes
excessive. Once poverty in a specific area exceeds a threshold of 30-40% (Wilson 1987,
Jargowsky1996), the problems of poverty grow exponentially. Crime rates are much
higher, education levels are much lower, unemployment is much higher, and health
problems are much worse. Because such impoverished areas offer little opportunities for
economic advancement, they are also much more likely to perpetuate the cycle of
poverty.

The impact of poverty beyond the confines of the center city is less clearly
defined. Altshuler et al. (1999) argue that “the costs of unequal opportunity” spill over
into the surrounding suburban areas. They argue that suburban areas will also feel the
impact of high crime rates, lower education levels, increased demand for government
services, decreased productivity, and a negative city image. In the case of education and
crime, Holzer (1999) finds that racial and economic segregation can lead to a significant
drop in high school graduation rates, which in turns leads to a decrease in earnings and a
higher job turnover rate, creating an economic drain on the entire metropolitan area
Increasing crime rates heighten the demand for police protection, which can lead to tax increases. In addition, crime problems are rarely confined within city boundaries. They generally spill over into surrounding suburban areas, imposing direct costs on suburban governments. Suburban governments that share a common border with the center city are most likely to feel the impact of increased crime rates.

Concentrated poverty is thought to impose economic costs as well as social costs on the entire metropolitan area. High levels of poverty can make an entire metropolitan area unattractive to business, industry, and wealthy residents. Increases in poverty indicate an increase in demand for publicly provided goods and services. This increased demand for redistributive goods and services may impose higher taxes on city residents. If taxes become too high and wealthy residents fail to perceive a personal benefit from increased taxes, wealthy residents may choose to leave the center city for the suburbs. If the spillover costs of concentrated poverty become too great, productive capital and labor may avoid and/or abandon the entire metropolitan area (Peterson 1981). When a metropolitan area is no longer viewed as a good investment, both the center city and suburban areas suffer (Rusk 1993).

There is surprisingly little empirical research supporting this hypothesis. Most of the empirical research regarding the relationship between income disparities and economic growth focuses on comparing the impact of income disparities within nation-states. This research generally uses a Gini coefficient or similar measure to tap income

---

15 Analysis conducted by Harry Holzer at request of Committee on Improving the Future of U.S. Cities Through Improved Metropolitan Area Governance (1996-1999). Findings reported in “Disparities in Out Comes” in Governance and Opportunity in Metropolitan America. Altshuler et al. (eds.)
disparities within an entire country (Persson and Tabellini 1994, Alesina and Roderik 1994). Persson and Tabellini (1994) develop and economic model to explain the relationship between country income disparities and economic growth over time (1830-1985). They explain this relationship by positing that income disparities indicate higher demands for redistributive goods and services, which diverts government resources away from economic development.

Partridge (1997) applies Persson and Tabellini’s model to the U.S. states and finds that the relationship between inequality and growth in the U.S. States is negative. “States with more income inequality at the beginning of the period actually experience greater subsequent economic growth …” (Partridge 1997:1030). One explanation Partridge offers for these orthogonal findings is that “models such as P&T’s [Persson and Tabellini’s] explain differences in growth between nations, but not within nations at the regional or state level” (Partridge 1997: 1030).

Bhatta (2001) applies these models to U.S. metropolitan areas. He examines how income inequality and poverty affected metropolitan area economic growth between 1980 and 1990. Like Partridge, he finds a positive relationship between metropolitan income inequality and metropolitan area economic growth. As income disparities within metropolitan areas increase, economic growth decreases. The robustness of this finding is evidenced by the fact that it holds across income levels and geographic regions (Bhatta 2001: 356). Thus, income disparity is not necessarily an automatic indicator of slower metropolitan area growth. There is some evidence, however, that reducing poverty levels
is economically beneficial to the metropolitan area. Bhatta concludes that reducing poverty, apart from helping the most vulnerable segments of society, is beneficial from the perspective of improving the future distribution of income and promoting economic growth (2001: 356-357).

In sum it appears that reducing income disparity will not promote economic growth, but reducing poverty will not hinder it.

Partridge’s (1997) and Bhatta’s (2001) studies are the most relevant to this examination of city/suburb economic relations. Their findings indicate that eliminating metropolitan area income disparities will not promote metropolitan area growth. If that is so, policies aimed at reducing income disparity in order to promote metropolitan area economic health may not achieve their goal. Although these studies provide useful information about aggregate metropolitan area income disparity and economic growth, they fail to test the impact of income disparities between center cities and their suburbs. Bhatta’s study is the most comparable, as he examines metropolitan area economic growth; however, his measure of inequality is a Gini coefficient of income distributions throughout the entire metropolitan area. Because he does not distinguish between center cities and their suburbs, his study does not directly examine the relationship between center city/suburb income disparity and economic growth. His findings, however, provide some indication that income disparity may not lead to slower metropolitan area economic growth. This chapter’s empirical analysis directly tests the relationship between center city/suburb income disparities and overall metropolitan area growth by measuring disparity as the ratio of center city to suburban per capita income. It also examines the relationship between metropolitan area government fragmentation and income disparity.
The Direction of Center City/Suburban Income Disparity

One important nuance of the center city/suburb economic relationship is that the direction of disparity is important. Center city/suburb income disparity is usually considered to be a problem only when the center city is economically weaker than its suburbs, because a strong center city is presumed to be the key to metropolitan area economic health. For example, Rusk (1993) suggests that metropolitan area growth is tied to a strong center city economy rather than a strong suburban economy. He reasons that center cities perform important agglomeration functions and serve as the economic engine of the metropolitan area. High concentrations of poverty in the center city place high service demands on cities and create disincentives for new productive capital and labor to locate in the metropolitan area (Peterson 1981).

Barnes and Ledebur (1998), Rusk (1993), Downs (1994), and Altshuler et al. (1999) conclude that the more center city per capita income lags suburban per capita income, the slower metropolitan area economic growth. Thus economic growth should be greater in metropolitan areas where the ratio of center city per capita income to suburban per capita income approaches one. Closing the gap between center city and suburban income disparity is presumed to improve the economic health of the metropolitan area. However, closing the center city/income gap is less important in metropolitan areas where the center city has a stronger economy than its suburbs. These metropolitan areas are expected to have higher rates of economic growth than metropolitan areas with where the center city has weaker economy than its suburbs.
Policy Recommendations for Reducing Income Disparity and Increasing Growth

One proposed solution to the problems associated with widening levels of center city/suburb income disparity is to alter current political boundaries. Redrawing existing political boundaries can potentially minimize the economic and racial segregation that is at the root of income disparities. The three most common policy recommendations to achieve this objective are: (1) aggressive use of liberal annexation laws (Rusk 1993), (2) formal city-county consolidation (Rusk 1993, Downs 1994), and (3) new regional governments that have the power functionally to consolidate fragmented governments (Downs 1994).

Each of these recommendations is based on the underlying assumption that fragmented metropolitan area government inflates the economic disparity between center cities and their suburbs. This increase in disparity has negative economic and social consequences for the entire metropolitan area. Consolidating existing local governments through annexation and city-county mergers is believed to reduce the economic and social harm caused by the concentration of poverty in the center city, by forcing individuals of all income levels to co-exist (Downs 1994; Rusk 1993; Barnes and Ledebur 1998). Local government consolidation has the added benefit of increasing the center city’s tax base, which enables the city to increase spending on existing programs and (in some cases) offer new ones. If the increase in the tax base is dramatic, a center city should be able to provide redistributive services for its poor residents and economic development policies for its wealthy residents. Economically strong center cities are believed to be attractive to business and an essential contributor to overall regional economic growth (Rusk 1993). When cities are able to expand their revenue base, they
can enact spending and policy changes to promote economic growth and minimize service inequalities. These policy objectives may also be achieved through regional governments with the authority to coordinate regional economic development and (in some cases) redistribute wealth among metropolitan area local governments.

Although this logic is superficially appealing, there are several reasons altering existing political boundaries may generate more problems than it solves. First, stable political boundaries are essential to the location decisions of individuals and businesses. Both select communities based on tax/service preferences comfortable in the knowledge that communities are stable entities. Aggressive attempts at annexation and city-county consolidation might send signals that the metropolitan area political environment is unstable and not a good place for productive capital and labor. Second, it is difficult to match political boundaries to economic boundaries for any length of time. Economic boundaries are fluid and cross multiple levels of government, which makes it difficult to maintain the overlap between political and economic boundaries indefinitely. Finally, these policy recommendations are politically unrealistic. History indicates that existing local government boundaries are not readily changed. Annexation attempts are often met with organized resistance and numerous city-county consolidations have failed (see Chapter 1).

Even if altering existing local government boundaries were politically feasible and economically sound, there would still some question whether this action would achieve its desired benefit of promoting regional economic growth. Before beginning the daunting task of geographically restructuring existing local governments, it is important to evaluate this series of assumed relationships empirically. First, does the structure of
local government influence center city/suburb economic disparity? Second, is this
disparity harmful to metropolitan area economic growth? Finally, what additional factors
influence metropolitan area economic growth?

Hypotheses, Research Design,
Data, and Operational Measures

Hypotheses

Several testable relationships are readily derived from the literature on center
city/suburban income disparity. The first hypothesis is that the structure of metropolitan
area government impacts center city/suburban income disparity. As the number of
metropolitan area general-purpose governments increases, so does center city/suburb
income disparity. Specifically, an increasing number of local governments should give
the suburbs an economic advantage over the center city. This is because a larger number
of local governments offer more residential options for those seeking to exit the center
city. Tiebout (1956) argues that as the number of governments increases, so does the
ability of consumer-voters to maximize their preferences for publicly provided goods and
services and the price (i.e., tax) they are willing to pay for those goods and services. The
desire to attract and retain productive residents forces local governments to engage in
market-like behavior by offering distinct tax/service bundles. This market of
governments is thought to lead a disproportionate number of wealthy citizens to the
suburbs, where they reside in economically homogeneous communities.

The second hypothesis is that an increase in the geographic density of
metropolitan area governments will lead to an increase in center city/suburb income
disparities. The spatial density of local governments, rather than the sheer number of
them, is an important determinant of population sorting. The attractiveness of leaving the
center city increases as the number of geographically proximate residential alternatives increases. Wealthy residents may find leaving the center city more attractive if they can maintain easy access to it. Decreases in transportation costs due to closer distances among local governments, may also allow low-income families to move from the center city. It is possible that a high concentration of local governments indicate the presence of a lower class-suburban ring around the city. This ring may enable lower income families to reside outside the center city. At its extreme, an exodus of low-income individuals from the center city, would ensure that the majority of city residents are there because they are too poor to leave.

The third hypothesis is that the greater the disparity in center city/suburb per capita income, the lower the rate of metropolitan area economic growth. High levels of income disparity are thought to indicate an economically weak center city. The costs of concentrated poverty such as high crime and an uneducated, poorly trained workforce, may spill over to the suburbs and make the entire region unattractive to business and industry. Implicit in this argument is the assumption that an economically strong center city is the key to a healthy metropolitan area economy.

The final hypothesis is when income disparity favors the center city (i.e., when center city per capita income is greater than suburban per capita income), reductions in that disparity have negligible effects on metropolitan area economic growth. In other words, disparity does not adversely affect metropolitan area economic health if the center city is economically strong.
Research Design, Data, and Operational Measures

Census data from 152 metropolitan statistical areas with populations over 250,000 are used to test the expected relationships between metropolitan area government structure (i.e. fragmented versus consolidated) and center city/suburb income disparity, as well as the relationship between center city/suburb income disparity and metropolitan area economic growth.\(^\text{16}\) All of the income data included in the analysis have been converted to 1989 constant dollars.\(^\text{17}\) This section explains the measurement decision for the two dependent variables – center city/suburb income disparity and metropolitan area economic growth – and outlines the key explanatory variables associated with each model.

Dependent Variables

The first dependent variable is center city/suburb income disparity. It is measured as the ratio of center city per capita income to suburban per capita income. As this measure increases, center per capita income grows stronger relative to suburban per capita income. All values greater than 1 indicate that center city per capita income leads suburban per capita income; 0 indicates parity between center city and suburb income; and values less than 1 indicate that center city per capita income lags suburban per capita income.

\(^\text{16}\) The data are from the *County and City Data Book 1972, 1977, 1983, 1988, and 1994* and the *Census of Governments*. Metropolitan Statistical Areas are defined using June 30, 1999 Census definitions. Only those metropolitan areas with a population greater than 250,000 in 1990 are examined. See footnote 9 in Chapter 3 and Appendix A for a complete description of the data.

\(^\text{17}\) All income measures have been converted to constant 1989 dollars using the consumer price index deflator (CPI-U-X1) (http://www.ssc.wisc.edu 2000).
The second dependent variable is metropolitan area economic growth. It is measured as the change in real metropolitan area per capita income from 1970-1980 and 1980-1990.\textsuperscript{18} Positive changes in metropolitan area income indicate economic growth.

**Center city/suburb disparity explanatory variables**

The explanatory variable of interest in the urban/suburban disparity models is metropolitan area government fragmentation. Two measures of fragmentation are examined. The first is the traditional measurement of local government fragmentation: the number of general purpose governments per 10,000 population. Previous research on fragmentation employs some variant of this measure. The second is a new measure of local government fragmentation designed to tap the geographic relationship among local governments: the number of general purpose local governments per square mile. It is expected that the geographic relationship of local governments is more important than the total number of local governments. Although these two measures are simultaneously included in each explanatory model, they are not substantively correlated.\textsuperscript{19}

This analysis includes controls for metropolitan area population, the proportion of population in the center city, metropolitan area per capita income and the percentage of the center city population that is black. This model loosely replicates the work of Morgan and Mareschal (1999).

\textsuperscript{18} The dependent variable is constructed as follows: Metro per capita income_{t2} - Metro per capita income_{t1} / Metro per capita income_{t1}. The analysis explaining metropolitan area economic growth is limited to one decade due to data limitations for some key independent variables. This is described in greater detail below.

\textsuperscript{19} The bivariate correlation between the total number of local governments per 10,000 population and the total number of local governments per square mile is .36 in 1970 and .45 in 1980.
The ratio of center city population to the entire metropolitan area population is used as a control variable in order to evaluate the impact of metropolitan area government fragmentation more fully.²⁰ A measure of metropolitan area population is also included as a control for MSA size, and as a proxy for other unmeasured influences and metropolitan area per capita income. Morgan and Mareschal state that this variable should be included “to be sure that any variations in income disparities and fiscal health in particular are not the result of differences in metropolitan area income levels” (Morgan and Mareschal 1999: 586). Because poor inner-city residents are often disproportionately black, the percentage of the black population in the center city is thought to explain increases in center city/suburb income disparities. The final control variables are a series of dummy measures – Northeast, South, West, and Midwest – to account for regional (i.e., multi-state) economic variations.²¹

**Metropolitan Area Economic Growth Explanatory Variables**

The two explanatory variables of interest in this model are center city/suburb income disparity and the direction of that disparity. The direction of center city/suburb income disparity is a dummy variable that is coded 1 when center city per capita income leads suburban per capita income and 0 otherwise.

The control variables included in this model are change in metropolitan area population, change in state per capita income, state annexation laws, percentage of

²⁰ Morgan and Mareschal (1999) treat this variable as an alternative measure of fragmentation. They argue it is an important indicator of center-city well being. A center city with a high percentage of the metropolitan area population is believed to be well-off relative to its suburbs. It is possible that the proportion of population in the center city may be related to the total number of local governments, but the measure does not directly tap the concepts of fragmentation described above.

²¹ West is the excluded category in the OLS analysis.
metropolitan area population with a college education, percentage of metropolitan area population that is black, and regional dummies (described above). The change in metropolitan area population is included to control for variations across metropolitan areas. This measure is constructed by subtracting metropolitan area population at $t_1$ from metropolitan area population at $t_2$ and dividing it by metropolitan area population at $t_1$. The state economy is measured as the change in state per capita personal income, net of the change in per capita personal income, for each metropolitan area.\(^{22}\) It is included because Chapter 3's findings indicate that the state economy has a positive and significant impact on the economic relationship between center cities and their suburbs. Based on these results, it is likely that metropolitan area economic growth will be influenced by state economic growth. A measure of state annexation laws is included to account for flexible center city boundaries. This dummy measure is coded 1 when annexation is allowed by state law and 0 when annexation is not allowed by state law. Finally, education is measured as the percent of the metropolitan area population over 25 years of age with a college degree and race is measured as the percentage of metropolitan area residents who are black.

Findings

Two sets of explanatory models are examined to evaluate the relationship between metropolitan area government structure and center city/suburb income disparity and the relationship between income disparity and metropolitan area economic growth.

---

\(^{22}\) This measure permits an examination of the impact of the state economy on metropolitan area economic growth that is independent of the portion of the state economy driven by the metropolitan area in question. It is the same measure used in Chapter 3.
All of the models reported below use OLS regression. Table 4-2 reports the findings for the center city/suburb income disparity models, and table 4-3 reports the findings for the metropolitan area economic growth models.

**Center City/Suburb Income Disparity**

The hypothesized relationships between local government fragmentation and center city/suburb income disparity are confirmed with an interesting twist – traditional measures of fragmentation are significant and positive and the new density measure is significant and negative. These findings are consistent across time. The traditional measure of fragmentation, the total number of general purpose governments per 10,000 population, is significantly and positively related to the ratio of center city/suburb income disparity. As the local government fragmentation increases income disparity favors the center city. In other words, an increase in the number of governments per capita leads to a center city that is economically stronger than its suburbs.

This finding is contrary to what the literature predicts. Traditionally, fragmentation is thought to favor the suburbs over the center city. Furthermore, Morgan and Mareschal (1999), the most recent research that specifically examines this relationship, fail to find a significant relationship between disparity and metropolitan area government structure. One reason for these disparate findings may be that Morgan and Mareschal limit their study to the 100 largest metropolitan areas. In addition, they limit their definition of metropolitan area fragmentation to cities with populations over 10,000 on the theory that these communities are “visible enough to prove potentially attractive to mobile urban dwellers” (Morgan and Mareschal 1999: 585). Theoretically, however, there is no reason not to include all metropolitan area communities. The differences in
the number of metropolitan areas examined (152 v. 100), and the number of communities included in the measure of fragmentation (all general purpose governments per 10,000 population v. all general purpose governments over 10,000 in population per 100,000 population), may explain why this study finds a significant relationship between fragmentation and income disparity even though Morgan and Mareschal (1999) failed to find one.

These findings are counterintuitive, thus a closer examination of this relationship is necessary before claiming that fragmentation actually economically benefits the center city over the suburbs. An inspection of the bivariate plots of fragmentation and center city/suburb income disparity and density and center city/suburb income disparity provide some insight into these unexpected findings. They reveal a basically flat relationship over time between fragmentation and center city/suburb income disparity and significant, negative relationship over time between density and center city/suburb income disparity over time (See figures 4-1 through 4-6).

These findings indicate that, as the number of local governments per square mile increase, disparity favors the suburbs. This conclusion is consistent with the expectation that increases in the number of geographically proximate suburban communities decrease the transportation and transaction costs of leaving the center city. It is easier for wealthy residents to reside outside the center city and still take advantage of the employment, cultural, and entertainment opportunities in the center city.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragmentation</td>
<td>.13*</td>
<td>.18***</td>
<td>.19**</td>
</tr>
<tr>
<td></td>
<td>(2.36)</td>
<td>(3.37)</td>
<td>(2.69)</td>
</tr>
<tr>
<td>Density</td>
<td>-4.50**</td>
<td>-5.00**</td>
<td>-5.51**</td>
</tr>
<tr>
<td></td>
<td>(-2.67)</td>
<td>(-3.23)</td>
<td>(-3.00)</td>
</tr>
<tr>
<td>% of metro area pop living in center city</td>
<td>.12</td>
<td>.07</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>(1.74)</td>
<td>(1.02)</td>
<td>(.58)</td>
</tr>
<tr>
<td>Metro area population</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>(1.12)</td>
<td>(1.08)</td>
<td>(1.64)</td>
</tr>
<tr>
<td>Metro area per capita income</td>
<td>-.00**</td>
<td>-.00*</td>
<td>.00**</td>
</tr>
<tr>
<td></td>
<td>(-3.01)</td>
<td>(-2.16)</td>
<td>(-2.69)</td>
</tr>
<tr>
<td>% of city population that is black</td>
<td>-.37***</td>
<td>-.33***</td>
<td>-.42***</td>
</tr>
<tr>
<td></td>
<td>(-3.85)</td>
<td>(-4.17)</td>
<td>(-4.65)</td>
</tr>
<tr>
<td>Midwest</td>
<td>-.04</td>
<td>-.07</td>
<td>-.08</td>
</tr>
<tr>
<td></td>
<td>(-1.00)</td>
<td>(-1.55)</td>
<td>(-1.56)</td>
</tr>
<tr>
<td>Northeast</td>
<td>-.10*</td>
<td>-.13**</td>
<td>-.12*</td>
</tr>
<tr>
<td></td>
<td>(-2.03)</td>
<td>(-2.75)</td>
<td>(-2.16)</td>
</tr>
<tr>
<td>South</td>
<td>.04</td>
<td>-.05</td>
<td>.10*</td>
</tr>
<tr>
<td></td>
<td>(.91)</td>
<td>(1.26)</td>
<td>(2.36)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.40***</td>
<td>1.22***</td>
<td>1.24***</td>
</tr>
<tr>
<td></td>
<td>(11.18)</td>
<td>(11.02)</td>
<td>(10.84)</td>
</tr>
<tr>
<td>R square</td>
<td>.46</td>
<td>.48</td>
<td>.48</td>
</tr>
<tr>
<td>N</td>
<td>142</td>
<td>149</td>
<td>151</td>
</tr>
</tbody>
</table>

*P < .05
**P < .01
***P < .001
It appears that previous research examining the relationship between metropolitan area government structure and center city/suburb income disparity failed to consider all aspects of metropolitan area fragmentation. The geographic density of metropolitan area governments appears to be more important than the number of local governments per capita in explaining center city/suburb income disparity. A large number of local governments per capita is not enough to generate center city/suburb income disparities, but a large number of geographically concentrated local governments is enough to generate income disparities that consistently favor the suburbs over the center city. Future policy recommendations based on altering the structure of metropolitan area government should consider the geographic relationship of local governments, rather than the total number of local governments.

Further research is necessary, however, to fully evaluate the impact of geography. The measure of density used is not ideal, as it does not account for the exact geographic distribution of local governments within a metropolitan area. Limiting the sample to metropolitan areas with populations greater than 250,000 solves some of this problem, because it emphasizes the largest metropolitan areas where city and county governments are more likely to be spatially proximate to one another. The ideal measure would use geographic information system (GIS) maps to calculate the distance between the center points of each local government in a metropolitan area. Unfortunately, such GIS data are not readily available for all 152 metropolitan statistical areas.

---

23 The primary problem with this measure is that two metropolitan areas with same total land area and number of local governments receive the same score regardless of the location of those local governments. For example, MSA₁ and MSA₂ may each be 100 square miles and have 5 local governments. In MSA₁, all 5 governments may all share boundaries and in MSA₂ they may be evenly distributed throughout the county. But they will be measured the same.
The other control variables in the model perform as expected. The percentage of metropolitan area population living in the center city and the metropolitan area population measure were statistically insignificant, and the measure of metropolitan area per capita income was substantively insignificant. The control for the percentage of city population that is black was negative and significant, confirming expectations that as the size of a center city’s minority population increases suburban per capita income increases relative to center city per capita income. Finally, there appear to be consistent regional differences across time. Cities in the northeast fare worse relative to their southern counterparts. Interestingly, in the 1990s center cities in the South had a slight advantage over their suburbs.

**Metropolitan Area Economic Growth**

The finding that the geographic distribution of metropolitan area governments influences center city/suburb income disparity is interesting, but what are the social and economic consequences of this disparity? Specifically, is metropolitan area economic health harmed by increases in center city/suburb income disparity? Is the direction of disparity important? In other words is it better for the metropolitan area economy to have a strong center city relative to its suburbs? Each of these questions is answered in the next set of analysis reported in Table 5.

This set of analyses reveals a mixture of expected and unexpected findings. The most interesting and unexpected finding is the change in the direction of the relationship between center city/suburb income disparity and metropolitan area economic growth across decades. The relationship is positive and significant between 1969 and 1979. During this period, income disparities that favored the center city at the beginning of the
decade translated into metropolitan area economic growth. This finding confirms the relationship between income disparity and economic growth expected by most urban scholars. But the relationship between income disparity and growth during the 1980s is contrary to expectations. Income disparities that favored the center city in 1979 actually harmed metropolitan area economic growth between 1979 and 1989.

A closer examination of changes in center city/suburb income over time reveals that these findings should not be that surprising. As demonstrated in Table 4-1, suburban per capita income has consistently grown at a faster rate than center city per capita income. In 1990, a minority of metropolitan areas had center cities with per capita incomes that exceeded those of their suburbs. This shift in metropolitan area wealth may indicate that the center city is fading as the dominant regional economic engine. It may be possible to have a strong metropolitan area economy and a relatively weak center city. The rise of the service-dominated economy, with its significant emphasis on technology, has altered the criteria for optimal business locations. Many businesses are opting to locate in the suburbs over the center city. Because well-educated human capital is the number one resource for many of these businesses, location amenities such as parks, golf courses, professional sports, theater, and attractive housing are important elements in location decisions. Many of these businesses have decided to locate in the suburbs rather than the center cities because the suburbs provide attractive tax incentives for business, and they have the bonus of allowing employees easy access to good amenities and attractive housing options.

An expanded time series is necessary to determine adequately whether the relationship between center city/suburb income disparity and metropolitan area economic
growth is positive or negative. Data from the 2000 Census should allow us to determine whether fundamental shifts in the economy are favoring the suburbs over the center city as the regional economic engine, or if the 1980 results are an anomaly. Data from the 2000 Census will also reveal if the change the in relationship between center city/suburb income disparity and metropolitan area economic growth is influenced by changes in technology and the rise of technology-based industry.  

One finding that supports the conclusion that a strong center city is not as important to regional economic growth as predicted is the insignificance of the dummy variable for center city per capita income leading the suburb. It appears that metropolitan area growth is not contingent on the center city leading its suburbs. Additional analysis provides further evidence that the center city is fading as the dominant regional economic engine. When the models reported in Table 4-3 are replicated without the income disparity measure, the center city per capita income dummy is significant and positive for the 1970s but insignificant for the 1980s. These findings demonstrate that the economic role of the center city may be changing.

---

24 One shortcoming of this new data is that it will not capture the impact of the dot.com collapse at the turn of the century.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio center city/suburb per</td>
<td>0.14**</td>
<td>-0.16**</td>
</tr>
<tr>
<td>capita income</td>
<td>(2.95)</td>
<td>(-2.69)</td>
</tr>
<tr>
<td>Center city per capita income leads suburb per</td>
<td>-0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>per capita income (dummy)</td>
<td>(-0.37)</td>
<td>(1.16)</td>
</tr>
<tr>
<td>Change in metro area population</td>
<td>0.13***</td>
<td>0.19***</td>
</tr>
<tr>
<td>(3.36)</td>
<td>(3.76)</td>
<td></td>
</tr>
<tr>
<td>% of metro area population that is black</td>
<td>0.12</td>
<td>0.16</td>
</tr>
<tr>
<td>(1.56)</td>
<td>(1.92)</td>
<td></td>
</tr>
<tr>
<td>% of metro area population with 4 yr college degree</td>
<td>-0.07</td>
<td>0.36**</td>
</tr>
<tr>
<td>(-0.58)</td>
<td>(2.60)</td>
<td></td>
</tr>
<tr>
<td>Annexation</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>(0.79)</td>
<td>(0.27)</td>
<td></td>
</tr>
<tr>
<td>Change in state per capita income net of msa</td>
<td>0.43***</td>
<td>0.61***</td>
</tr>
<tr>
<td>(4.19)</td>
<td>(6.88)</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>(0.58)</td>
<td>(1.01)</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>-0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>(-0.33)</td>
<td>(1.92)</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>-0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>(-0.77)</td>
<td>(1.00)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.03</td>
<td>0.10</td>
</tr>
<tr>
<td>(-0.55)</td>
<td>(1.43)</td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>0.48</td>
<td>0.54</td>
</tr>
<tr>
<td>N</td>
<td>142</td>
<td>141</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01, ***P < .001
The other variables in the model provide further insight into metropolitan area economic growth. Population growth is an important predictor of economic growth. This finding is not surprising, because workers follow jobs. Metropolitan areas with employment opportunities will attract new residents.

The most significant explanation for metropolitan area economic growth is state economic growth. Over time, changes in state per capita income are consistently the best predictor of changes in metropolitan area per capita income. This finding is expected, as Brace (1993) and others have demonstrated that state economies (and their local components) are a function of larger regional economies. In light of Brace’s work this finding is especially interesting because it suggests that the state economy is not the only predictor of metropolitan area economic growth. It appears that center cities and their suburbs have some control over their economic fate, and the policy decisions they make are important. This conclusion reinforces the similar conclusion made in Chapter 3. Cities and their suburbs share an economic bond which exists independent of the state economy.

Discussion

This chapter reveals a series of expected and unexpected findings. It confirms that suburban areas have grown substantially stronger economically than their center city counterparts over the past 20 years. In 1970, 42% of metropolitan areas had suburban per capita incomes that exceeded center city per capita incomes. By 1990, that number had jumped to 67%. If this trend has persevered during the 1990s, an even smaller number of metropolitan areas will continue to have center cities that are economically stronger than their suburbs.
Many scholars and practitioners lament this shift in the economic balance of power between center cities and their suburbs. They argue that it is socially and economically harmful for the entire metropolitan area when the center city falls economically behind its suburbs. High concentrations of poverty in the center city are thought to generate social pathologies, such as poor health and high levels of crime, which adversely impact both the center city and its suburbs. Furthermore, once the center city ceases to be the regional economic engine, it is believed that the metropolitan area is no longer attractive to productive capital and labor.

The structure of metropolitan area government is widely believed to exert significant influence on center city/suburban income disparity. Fragmented metropolitan areas facilitate the exodus of the wealthy from the center city by providing numerous residential options. Consequently, consolidated local government is touted as the most effective way to reduce center city/suburban income disparities. The findings of this chapter, however, question the wisdom of this policy decision.

The empirical analysis in this chapter reveals that the geographic concentration of local governments is a more important determinant of center city/suburb income disparity than the total number of metropolitan area governments - an increase in the number of general purpose governments per square mile causes center city/suburb income disparity to favor the suburbs. In contrast, an increase in the total number of local governments per 10,000 population is positively related to center city/suburb income disparities that favor the center city. An examination of the bivariate plots of these relationships indicates the latter relationship may be significant, but not substantive. The relationship between fragmentation and center city/suburb income disparity is relatively flat, whereas the
relationship between density and center city/suburb income disparity is significantly negative. These findings suggest that we may need to rethink how we measure fragmentation. The geographic density of metropolitan area governments appears to be more important than the total number of local governments per 10,000 population in explaining center city/suburb income disparity.

Finally, this research demonstrates that income disparities that favor the suburbs over the center city are not inherently bad. During the 1980s, income disparities that favored the center city actually led to stronger metropolitan area economic growth. This finding was completely unexpected by the literature. Previous research predicts that income disparity favoring the center city is a necessary precondition for metropolitan area economic growth. The expected relationship was evident in the 1970s, but not the 1980s.

It appears that the importance of suburban economic health to metropolitan area economic growth grew substantially stronger in the 1980s. These findings suggest that the center city may be fading as the dominant regional economic engine. They also suggest that it is possible to have a strong metropolitan area economy and a relatively weak center city – contrary to all prior expectations in the literature. Further research is necessary to fully explain this dramatic shift in the relative importance of the center city economy versus the suburban economy for metropolitan area economic growth. It is possible the findings from the 1980s are anomalous. However, if data from the 2000 Census confirms the negative relationship between center city/suburban income disparity and metropolitan area economic growth, it will be necessary to rethink previous policy recommendations that emphasize strengthening the center city economy over the suburban economy. If the center city is no longer the economic engine of the
metropolitan area, then policy proposals to consolidate existing local governments and expand the boundaries of the center city may not have the desired economic impact. More research is necessary before we embrace a series of sweeping policy changes designed to alter the economic balance of power between the center city and its suburbs.
Chapter 5

Local Intergovernmental Cooperation

It is evident that center cities and their suburbs share an enduring economic bond. Consequently, it may be in their collective interest to cooperate in the provision and/or production of some goods and services. But what is the appropriate infrastructure for cooperation? Practitioners and scholars such as Rusk (1993, 1999), Downs (1994), Barnes and Ledebur (1998), and Drier, Mollenkopf, and Swanstrom (2001) argue that changing existing structures of metropolitan area government is the best way to promote local government cooperation. They advocate liberal state annexation laws, city-county consolidations, new regional governments, and/or aggressive federal legislation as the optimal methods for ensuring local government cooperation.

These proposals are based on two assumptions. First, they assume that fragmented and consolidated metropolitan area governments produce distinct policy outcomes, and second, they assume that consolidated local government is the most efficient way to promote local government cooperation. Most of these policy suggestions, however, are difficult to implement. History indicates that aggressive annexation efforts by large cities are often met with effective, organized resistance, and city-county consolidation efforts are routinely defeated at the polls. Furthermore, cities are often unwilling to relinquish authority to newly formed regional governments. Finally, there is little reason to believe the current Republican administration will embrace sweeping federal policy reforms that benefit major urban areas.

Consolidated metropolitan area government is not the only possible infrastructure for local government cooperation. Parks and Oakerson (2000) and Savitch and Vogel
(2000) argue that metropolitan area "governance" is a preferable alternative for coordinating the policy decisions of local governments in fragmented metropolitan areas. Metropolitan area "governance" refers to coordinated provision and production of publicly provided goods and services.

Service provision refers to the choices of goods and services that a city will make available to its citizens and the decision rules for financing and regulating and consumption and use of these goods and services. Service production addresses the method or methods chosen to fulfill this obligation (Stein 1990:39).

These two elements of service delivery are distinct. Local governments can coordinate their policy efforts in the provision and/or production of publicly provided goods and services (Stein 1990). Furthermore, they can coordinate the provision and/or production of a single good or service or a wide range of goods and services. Areas such as Charlotte-Mecklenburg county and Louisville-Jefferson county coordinate their policy activities on a wide range of functions including, regional planning, waste-water treatment, and economic development activities. This form of local government cooperation allows fragmented governments to coordinate their policy decisions without sacrificing their political autonomy. It demonstrates that fragmented metropolitan area governments can cooperate as well as compete.

Savitch and Vogel (2000) state that the ideal of "governance without government" is best realized through "large numbers of independent governments (voluntarily) cooperating through multiple, overlapping webs of interlocal agreements" (Savitch and Vogel 2000:164). This chapter examines metropolitan area governance by exploring the relationship between fragmented metropolitan area government and the incidence of local

---

25 This referent is to Louisville-Jefferson county before voters approved formal city-county consolidation in November 2000.
intergovernmental agreements. Specifically, it asks whether local governments in consolidated or fragmented metropolitan areas are more likely to engage in local intergovernmental agreements, and whether the geographic density of metropolitan area governments influences the likelihood that they will cooperate.

These questions are addressed in five sections. Section one defines local government cooperation in term of local intergovernmental service agreements. Section two examines previous research on intergovernmental service agreements. Section three identifies testable hypotheses, reviews the data, and describes the research design. The final sections present the findings of the empirical analysis and discuss their implications.

Defining Intergovernmental Cooperation

All metropolitan area governments have the option to compete or cooperate in the provision/production of goods and services, yet fragmented local government is usually associated with competition and consolidated local government is usually associated with cooperation. Consequently, local government consolidation is promoted as the optimal way to increase cooperation and streamline government. According to Carr and Feiock (1999), many proponents of regional local government argue that consolidated local governments will result in "reduced costs of service delivery; clearer lines of governmental authority, and with it, improved accountability of elected officials; and increased regional coordination with respect to economic development" (Carr and Feiock 1999: 477). Local governments in fragmented metropolitan areas may be able to use local intergovernmental service agreements to achieve similar benefits.

Local intergovernmental cooperation, broadly defined, includes all policy activities that require some level of policy coordination between one or more local
governments. These efforts may include either formal or informal agreements among local jurisdictions, and may (or may not) require the exchange of revenue. Formal intergovernmental cooperation often includes written agreements among local governments. In some cases, these agreements are codified by one or all of the participating local governments. Examples of formal intergovernmental agreements include fee-for-service contracts, revenue-sharing agreements, and other forms of financial cooperation. Formal intergovernmental agreements often involve the transfer of financial resources among local jurisdictions. Informal intergovernmental cooperation is defined as unwritten agreements among city officials. These informal intergovernmental agreements are often the result of “handshake” deals among local officials, where the division of service responsibility is understood but never formalized. These agreements are less likely to involve the transfer of funds.

Formal and informal local intergovernmental agreements are good examples of local government collective action. Chapter 2 outlines a theory of institutional collective action and applies it to local government institutional behavior. It argues that local government collective action is a function of: common policy objectives, coercion/selective incentives, group size, the presence of a strong leader/policy entrepreneur, local government geography, and policy attributes. The last two determinants of institutional collective action are specific to explaining local government cooperation at the metropolitan area level. An increase in the geographic density of metropolitan area local governments increases the likelihood that policy spillovers (positive and negative) will be felt across communities. These policy spillovers may create a common policy objective, among local officials seeking to minimize their
impact, thus providing a strong incentive for local government collective action. The attributes of goods and services being provided also provide common policy objectives. Goods and services that are capital intensive rather than labor intensive, offer economies of scale benefits to local governments who choose to cooperate in their collective provision and/or production. Consequently, they encourage local government collective action.

The empirical analysis in this chapter is limited to formal intergovernmental agreements that require the exchange of revenue. This type of intergovernmental agreement is easily identifiable and readily quantifiable. In addition, the exchange of revenues ensures that these agreements reflect substantive policy cooperation among local governments. The fact that they impact the budget decisions of local governments indicates they are more than paper agreements. These agreements are identified using the 1992 Census of Governments Finance Records.

Local intergovernmental service agreements are a good example of formal local intergovernmental cooperation. They provide a solid infrastructure for local government cooperation that does not requiring changing the formal institutions of metropolitan area government. Traditionally, local intergovernmental service agreements involve local governments contracting with each other for the production of specific goods and services. These agreements are often fee-for-service contracts, thus requiring the exchange of revenue among local governments.

The presence of formal, revenue-based intergovernmental agreements among metropolitan area local governments should also indicate the presence of additional local intergovernmental agreements, both formal and informal. The likelihood that local
governments will cooperate with each other in other policy endeavors increases with each additional intergovernmental agreement. Once local governments embrace intergovernmental service agreements as a preferable option for producing a few goods and services, it is likely that they will also use informal agreements to produce additional goods and services. Local officials that have worked together repeatedly over a number of years often develop significant reservoirs of trust and performance expectations that can facilitate informal local intergovernmental cooperation. A norm of sustained formal intergovernmental agreements may create an atmosphere that encourages the use of information intergovernmental agreements as well.

The structure of metropolitan area government should influence the likelihood that local governments will use intergovernmental service agreements as a form of intergovernmental cooperation. The norm of competition should cause fragmented metropolitan areas to be less likely to cooperate, but this expected negative relationship may be mitigated by the geographic density of metropolitan area governments. The geographic density of metropolitan area governments influences the ability of residents to live, work, and recreate in multiple communities, the likelihood that local officials will have personal as well as professional relationships, and the likelihood that policy spillovers will affect multiple communities. Thus, the geographic density of metropolitan area governments should be positively associated with the incidence of local intergovernmental cooperation. This relationship, however, is mediated by the economic attributes of the goods or services being provided. Goods and services that are capital-intensive and benefit from economies of scale are more likely to be provided collectively. The following section summarizes prior research regarding the importance of the
geographic relationship among metropolitan area governments, as well as the role
economic attributes of public policy play in explaining local government cooperation.

Previous Research

Most research on local intergovernmental agreements focuses on local
government contracting with private for-profit vendors, non-profit vendors, and other
local governments. Collectively, this research identifies several factors that contribute to
local intergovernmental cooperation. These include the economic benefits of lower
service costs (Ferris and Graddy 1986, Morgan and Hirlinger 1991, Morgan, Hirlinger,
and England 1987, Stein 1990); the desire for service continuity across local jurisdictions
(Ferris and Graddy 1986, Morgan and Hirlinger 1991); incentives and regulations from
state and federal governments (Morgan and Hirlinger 1991); homogeneous resident
preferences for publicly provided goods and services (Ferris and Graddy 1986); the
presence of a strong policy entrepreneur (Schneider 1989), and the presence of a viable
number of suppliers (i.e. a local governments) (Morgan and Hirlinger 1991).

All of this research, however, focuses on dyadic relationships. Each individual
study examines the decisions of a single city to provide goods and services by contracting
with a single service producer. They do not attempt to explain the macro conditions that
encourage local government collective action within the metropolitan area. Thus, they
fail to explain local government cooperation in the aggregate.

This chapter examines the incidence of local intergovernmental agreements
within a metropolitan area. Unlike previous research, it does not try to explain the policy
decisions of individual local governments; rather, it seeks to identify the conditions that
foster cooperation, in the form of intergovernmental service agreements, among all
metropolitan area governments. These conditions include metropolitan area government fragmentation, metropolitan area government density, and the economic attributes of the goods and services that are the subject of the intergovernmental agreements.

Metropolitan Area Government Structure: Fragmentation

Metropolitan area fragmentation refers to the number of local governments per 10,000 population. Local governments in highly fragmented metropolitan areas are expected to compete rather than cooperate in their provision of goods and services, due to the need to respond to diverse policy preferences of metropolitan area residents. Tiebout (1956) argues that as the number of local governments increases, the mobility of consumer-voters across local jurisdictions enables local governments to engage in market-like competition. This competition leads local governments to provide a variety of tax/service bundles to attract residents. Because cooperation would reduce the ability of local governments to offer diverse tax/service bundles, local intergovernmental agreements may not be in the economic interest of the city.

Additionally, many local governments were formed as a result of differences in resident preferences for publicly provided goods and services. Many local governments were created to meet demands for racial and economic exclusion, as well as lower taxes and minimal services (Burns 1994, Miller 1981). An increase in the number of metropolitan area local governments signals a greater diversity of policy preferences among metropolitan area residents, which decreases the likelihood that metropolitan area governments will cooperate.
Metropolitan Area Government Structure: Density

It is possible, however, that the predicted negative relationship between metropolitan area fragmentation and local government cooperation could be mitigated by the geographic relationship of fragmented metropolitan area governments. As the density of local governments increases, it may be more efficient for fragmented local governments to cooperate rather than compete. The geographic relationship among local governments could influence the likelihood of local cooperation in several ways.

First, an increase in the geographic density of metropolitan area governments increases the likelihood that policy spillovers will affect multiple local governments. Most local government taxing and spending decisions generate some spillover costs or benefits (Netzer 1997). Positive spillovers often enable free-riders. For example, if a city invests in an elaborate park system, residents of neighboring cities may use those parks without paying the taxes that built and maintain them. As the geographic density of metropolitan area governments increases so does the potential for policy spillovers.

The desire to maximize positive policy spillovers and minimize negative spillovers may induce local governments to cooperate. Local intergovernmental agreements allow local governments to more evenly distribute the costs and benefits of policies that are prone to generate spillovers, minimizing free-riding and negative externalities. They also have the potential to provide spillover political benefits to elected officials: elected officials in multiple communities can take credit for the benefits generated by intergovernmental agreements (Mayhew 1974). By internalizing the social, economic, and political consequences of policy decisions, intergovernmental agreements achieve many of the same objectives as consolidation.
Second, increases in the geographic density of metropolitan area governments increase the number of easily accessible suppliers. A large number of local governments in a metropolitan area indicate a large number of potential service providers. Morgan and Hirlinger (1991) argue that the number of available service providers is a key determinant of local government contracting, because it is impossible to contract for service production with other governments if they do not exist. But their explanation is incomplete, because if focuses solely on the number of providers; they fail to consider the importance of easy access to other local governments. Geographically dense local governments may be better able to realize the efficiencies associated with intergovernmental agreements than local governments that are geographically disperse. For example, in determining whether it would be in the economic interest of small metropolitan area governments to pool their resources and build a wastewater treatment plant, transportation costs would an important factor. Because the costs of transporting the waste to and from the plant would decrease as the geographic distance between the coordinating communities and the plant declines, cooperation would be more attractive to geographically dense governments.

**Economic Attributes of Publicly Provided Goods and Services**

The relationship between metropolitan area government density and local intergovernmental cooperation is expected to be mediated by the attributes of the goods and services being provided. Capital-intensive goods and services are more likely to be produced and/or provided collectively than labor-intensive goods and services, because of the benefit from economies of scale.
Capital-intensive goods and services

Capital-intensive goods and services often require large amounts of equipment and materials, which are usually cheaper when purchased in large quantities. The average cost of these goods and services significantly decreases as the amount of equipment and materials being purchased (and the size of the population purchasing them) increases. Thus, these projects benefit from economies of scale.

Larger local governments have the tax base and access to capital markets necessary to raise the funds to provide capital-intensive goods and services themselves. They can also spread the costs over a larger population, which drives down the average cost of these goods and services. In contrast, smaller local governments have neither the tax base nor the access to capital markets necessary to fund the high start-up costs of many capital-intensive projects without incurring a large per capita tax burden. They also lack the population to make the average costs of these goods and services affordable. If smaller local governments want to provide their residents these goods and services, they must either pool their resources or contract with larger local governments (or private service vendor) for their production.

Local governments should be more likely to cooperate in the provision and/or production of capital-intensive goods and services because of the potential cost savings associated with economies of scale. Furthermore, cooperation should be facilitated by the lack of diversity policy preferences for capital-intensive goods and services. Metropolitan area residents are generally uniform in their expectation that clean water will come from the tap and that solid-waste and sewage will be removed from their home,
all at a reasonable price. There is generally little concern over how their local
governments choose make these services available to their residents.

In summary, an increase in the geographic density of metropolitan area
governments should lead to an increase in the number of local intergovernmental
agreements for capital-intensive goods and services.

**Labor-intensive goods and services**

Labor-intensive goods and services do not have the high start-up costs of capital-intensive goods and services. Nor does their average cost dramatically decrease with an
increase in the amount of goods and services being produced. Consequently, smaller
local governments may not realize economic benefits from collectively
providing/producing labor-intensive goods and services. Altshuler et al. (1999) confirm
this conclusion.

The preponderance of the evidence indicates that small local governments
(and thus metropolitan areas characterized by fragmentation) are more
efficient for labor-intensive services, whereas larger units are more efficient
for capital-intensive services (because of economies of scale) and for certain
overhead functions (Altshuler et al. 1999: 106).²⁶

The lack of cost savings associated with collectively producing labor-intensive
goods and services indicates that local governments should not rush to cooperate in the
production of these goods and services. Consequently, an increase in the geographic
density of metropolitan area governments may not lead to an increase in the number of
local intergovernmental agreements for labor-intensive goods and services.

²⁶ The quote is cited by H.V. Savitch and Ronald Vogel. 2000. Metropolitan
Consolidation versus Metropolitan Governance in Louisville. *State and Local
Government Review* 32: 198-212. page 204.
Hypotheses

Several testable hypotheses can be derived from the preceding discussion. The structure of metropolitan area governments, the geographic density of metropolitan area governments, and the economic attributes of publicly provided goods and services should all influence the likelihood that local governments will engage in some form of intergovernmental collective action.

Metropolitan area fragmentation is thought to generate market-like competition among local governments over the attraction and retention of productive capital and labor (Tiebout 1956, Peterson 1981). This competition produces economic benefits for local governments; consequently, cooperation is often not in their economic self-interest. In addition, fragmented local governments may have diverse policy preferences that make it difficult to identify policies where cooperation is mutually beneficial. Metropolitan area government fragmentation (i.e. total number of general purpose governments per 10,000 population) is expected to be negatively related to the overall incidence of local intergovernmental agreements.

It is possible, however, that this negative relationship is mitigated by an increase in the geographic density of metropolitan area governments. Most publicly provided goods and services produce some spillovers - positive or negative - that impact surrounding jurisdictions. As the number of geographically proximate jurisdictions increases, so does the incidence of spillovers. Geographically proximate local governments seeking to minimize the spillover costs and benefits may find it in their self-
interest to cooperate. Thus, the likelihood of local intergovernmental agreements is expected to increase, as the number of geographically proximate jurisdictions increases.

Finally, the positive relationship between the geographic density of metropolitan area governments and local intergovernmental cooperation may be mediated by the economic attributes of publicly provided goods and services. Goods and services that are capital-intensive, rather than labor-intensive, are more likely to encourage local intergovernmental cooperation.

Research Design

The hypotheses are tested by estimating the incidence of intergovernmental agreements for 152 metropolitan statistical areas with 1990 populations greater than 250,000. The data were compiled from the *Census of Governments 1992: Finance Statistics*, the *County and City Data Book 1994*, and the *Advisory Commission on Intergovernmental Relations (ACIR) 1992*.

The incidence of local intergovernmental agreements is an event count of the total number of local intergovernmental expenditures as reported in the *Census of Governments 1992: Finance Statistics*. Each time a city or county government in a metropolitan area reported any level of local intergovernmental expenditures in the 1992 *Census of Governments*, it was coded a 1. These “ones” were then aggregated by metropolitan area to determine the total number of local intergovernmental agreements within a metropolitan area. The Atlanta metropolitan area had the highest number of

---

27 The dependent variables are based on the intergovernmental expenditures of city and county governments within the MSA rather than the intergovernmental expenditures of all taxing and spending jurisdictions. City and county expenditures were selected because these entities are general purpose governments that provide a variety of goods and services. This makes it possible to more fully examine the role of policy attributes in local governments’ decisions to cooperate. Single purpose governments, such as special
local intergovernmental agreements with 157, and the metropolitan areas of Sarasota, Spokane, and Shreveport had the lowest number of local intergovernmental agreements with zero.  

This study examines three different measures of the incidence of local intergovernmental agreements. These include: the total number of city and county intergovernmental agreements; the total number of capital-intensive intergovernmental agreements; and the total number of labor-intensive intergovernmental agreements. In addition, estimates are reported for each type of intergovernmental agreement reported by the Census of Governments 1992.

districts and school districts, are not included in this analysis because their narrow functional scope of responsibility makes them more difficult to evaluate.

The dependent variables only indicate the total number of local intergovernmental agreements by type within a metropolitan statistical area. They do not measure the amount of these expenditures nor do they indicate what percentage of local government resources are allocated toward intergovernmental expenditures. This coding decision was made because local intergovernmental expenditures are a relatively rare event. And it was difficult to fully evaluate the relationship between metropolitan area government structure and local government cooperation relying on the expenditure data.

The total incidence of intergovernmental expenditures for administration, airports, corrections, parking, education, fire, general control, highways, health, hospitals, housing, libraries, natural resources, police, parks, protective services, sewerage, public welfare, water transportation, and solid waste management.

Capital-intensive agreements: airports, corrections, highways, hospitals, housing, sewerage, water transportation, parking, natural resources, parks, and solid waste management.

Labor-intensive agreements: administration, fire, general control, libraries, police, protective inspections, education, health, and welfare.

Separate models were estimated for the incidence of intergovernmental agreements for administration, airports, corrections, education, fire, general control, highways, health, hospitals, housing, libraries, natural resources, police, parks, sewerage, public welfare, and solid waste management. Separate models were not estimated for the incidence of intergovernmental agreements for parking, protective inspection, and water transport,
The first explanatory variable is the total number of general purpose local
governments per 10,000 population.\textsuperscript{33} This traditional measure of fragmentation is
included to examine the relationship between metropolitan area government structure and
the incidence of local intergovernmental agreements. The relationship is expected to be
negative.

The second explanatory variable is the number of general purpose governments
per square mile. This measure taps the geographic density of local governments in a
metropolitan area. As the number of local governments per square mile increases, so
does the likelihood of policy externalities and spillovers. Local intergovernmental
cooperation should be positively associated with an increase in the geographic density of
local governments.\textsuperscript{34}

because there were less than four of each of these agreements across all 152 MSAs.
Finally, a separate model was not estimated for general government NEC expenditure
agreements, because this category includes a mixture of agreements that could not
otherwise be classified.

\textsuperscript{33} Fragmentation has also been measured as the total number of government units in a
given geographic area. The per capita measure of fragmentation is used rather than the
absolute measure of fragmentation, because it accounts for variations in the population
across metropolitan areas.

\textsuperscript{34} This is not the ideal measure of local government density, as it does not account for the
exact geographic distribution of local governments within a metropolitan area. Limiting
the sample to metropolitan areas with populations greater than 250,000 helps solve this
problem, because it emphasizes the largest metropolitan areas where city and county
governments are more likely to be spatially proximate to one another. In addition, this
measure has the problem of scoring two metropolitan areas with same total land area and
number of local governments the same, regardless of the location of those local
governments within a metropolitan area. For example, MSA\textsubscript{1} and MSA\textsubscript{2} may each be
100 square miles and have 5 local governments. In MSA\textsubscript{1} all 5 governments may all share boundaries, while in MSA\textsubscript{2} they may be evenly distributed throughout the county.
Obviously, MSA\textsubscript{1} more appropriately fits the theory. The ideal measure would use
geographic information system (GIS) maps to calculate the distance between the center
points of each local government in a metropolitan area. Unfortunately, such GIS data are
not readily available for all 152 MSAs.
Several control variables are also included in the models. Two dummy variables are included to control for the influence of state law on local government decisions to engage in intergovernmental agreements. The first dummy variable is coded 1 if state law permits annexation and 0 otherwise. The second dummy variable is coded 1 if state law permits intergovernmental agreements and 0 otherwise. The data for these variables come from the *Advisory Commission on Intergovernmental Relations (ACIR)*.

These two control variables are expected to have different impacts on the incidence of local intergovernmental agreements. The annexation dummy should be positive and the intergovernmental agreement dummy should be negative. States that allow annexation have given cities more liberal control over their policy decisions. Thus, these local governments may be more inclined to use alternative forms of service provision/production, such as local intergovernmental agreements. In addition, cities that have the power to annex may be able to coerce other local governments to cooperate with them by threatening to annex them.

The local intergovernmental agreement dummy should be negatively related to the incidence of local intergovernmental agreements. States that have specific laws allowing intergovernmental agreements are actually regulating their use. The *ACIR* survey question asks if “interlocal service agreements are allowed by general law or State Constitution”. It does not ask if state law prohibits intergovernmental agreements. If states have laws regarding intergovernmental service agreements, they must be regulating the terms and conditions of their use. If states do not have laws regarding
intergovernmental service agreements, cities and counties may be unregulated in their use of such agreements.\textsuperscript{35}

The final control variable is the percentage of metropolitan area population located in the center city. This variable is included to control for center city size. It could be positively or negatively related to local government cooperation. A positive relationship would indicate that local intergovernmental agreements are driven by the presence of a large center city that contracts with smaller local governments to provide them goods and services. A negative relationship would indicate that most local intergovernmental agreements are a product of smaller local governments pooling their resources to produce and provide specific goods and services among themselves.

Negative binomial regression is used to explain the incidence of local intergovernmental contracting. “Poisson and/or negative binomial regression is generally used when the dependent variable reflects a count holding discrete values and a preponderance of zeros and small values (Greene, 1993: 676-679)” (Bolks 2001: 21). In this case, a test for dispersion indicates that the dependent variable overdispersed, so a traditional poisson model is not appropriate.\textsuperscript{36} “In a poisson distribution the mean and

---

\textsuperscript{35} The ACIR reports that a majority of states have laws that specifically allow local intergovernmental service agreements. Unfortunately, the study does not elaborate on the nature and scope of the various state laws regulating intergovernmental agreements. The wording of the ACIR survey question does suggest that states that have laws permitting local intergovernmental service agreements are regulating this activity. This conclusion is confirmed by comparing responses to the intergovernmental agreement (IGA) ACIR survey question to other ACIR questions regarding state regulation of local governments. Basic variable correlation and factor analysis reveals that state government regulation of intergovernmental agreements is related to state government limits on local government borrowing, city debt, consolidation, and property taxes.

\textsuperscript{36} The Chibar test is a log likelihood test that is alpha = 0. The poisson models assume that alpha = 0; the negative binomial assumes that alpha does not = 0.
variance are equal. When the variance is greater than the mean the distribution is said to display overdispersion” (http://www.gseis.ucla.edu/courses/ed231c/notes1/nbreg1.html).

In other words, in a poisson model the chance of each event occurring is constant of the other events in the model, whereas in a negative binomial the chance of each even occurring is contingent on the other events in the model. In the case of local intergovernmental cooperation, it is likely that one local government’s decision to contract with another local government for the production of goods and services would influence the likelihood that other metropolitan area governments would do the same. Theoretically, the negative binomial distribution is a proper fit for the model, and the diagnostic tests support this assumption.

Findings

Table 5-1 reports the negative binomial regression findings for the total number of metropolitan area local intergovernmental agreements, the total number of metropolitan area capital-intensive local intergovernmental agreements, and the total number of labor-intensive local intergovernmental agreements.38

37 “Negative binomial regression is used to estimate count models when the poisson estimation is inappropriate due to overdispersion (which is most of the time). In a poisson distribution the mean and variance are equal. When the variance is greater than the mean the distribution is said to display overdispersion. The nbreg command estimation includes an ancillary parameter which is an estimate of the degree of overdispersion. For computational purposes, Stata estimates ln(a) which is then converted to a. When a is zero, negative binomial has the same distribution as poisson. The larger a is the greater the amount of overdispersion in the data. When there is overdispersion the poisson estimates are inefficient with standard errors biased downward yielding spuriously large z-values” (http://www.gseis.ucla.edu/courses/ed231c/notes1/nbreg1.html).

38 These groupings of intergovernmental agreements are far from perfect due to the lack of information regarding the exact content of each specific local intergovernmental agreement category (e.g. airports, health, etc.). This lack of specificity guarantees that some labor-intensive intergovernmental agreements are included in the capital-intensive variable and vice versa. But in the aggregate, this classification of capital-intensive and
The empirical analysis strongly confirms the hypothesized relationships. As predicted, the geographic density of metropolitan area governments is significantly and positively related to the incidence of local intergovernmental agreements. As the number of local governments per square mile increases, so does the number of local intergovernmental agreements.

Furthermore, the impact of density is mediated by the economic attributes of the goods and services being provided. This is best evidenced by the substantive interpretation for the regressions provided in Table 5-2. A comparison of the substantive impact of the capital-intensive model and the labor-intensive model shows that the strongest impact of density is on capital-intensive metropolitan area local intergovernmental agreements. Moving from the maximum number of local governments per square mile to the minimum number of local governments per square mile produces a difference of 66 capital-intensive intergovernmental agreements. In contrast, moving from the maximum number of local governments per square mile to the minimum number of local governments per square mile only produces a difference of 15 labor-intensive intergovernmental agreements.

The findings also demonstrate that the geographic density of metropolitan area governments is more important than metropolitan area government fragmentation in predicting the incidence of local intergovernmental agreements. As predicted, metropolitan area government fragmentation is negatively related to the incidence of all three measures of local intergovernmental agreements, but it is not significant.

---

labor-intensive intergovernmental agreements appears to reflect the intended policy attribute adequately.
The control variables provide a mixture of findings. The percentage of metropolitan area population in the center city is consistently negative, but insignificant. State annexation laws are positively and significantly related to the incidence of local intergovernmental agreements. The substantive interpretation of this variable indicates that state annexation laws have a slightly stronger impact on labor-intensive agreements than capital-intensive agreements: The presence of state annexation laws translates into an increase of four capital-intensive intergovernmental agreements and nine labor-intensive intergovernmental agreements.

The dummy variable for state intergovernmental agreement laws produces mixed results. It is insignificant in the explanation of the incidence of all intergovernmental agreements and labor-intensive intergovernmental agreements. But it performs as predicted in explaining the incidence of capital-intensive local intergovernmental agreements. There are about three more capital-intensive intergovernmental agreements in metropolitan areas in located states that do not have laws regulating local intergovernmental agreements than there are in metropolitan areas located in states that have laws regulating local intergovernmental agreements.
Table 5-1
Negative Binomial Regression Models for the Incidence of Local Intergovernmental Agreements

(Z Scores)

<table>
<thead>
<tr>
<th></th>
<th>Total Number of Local IGAs</th>
<th>Capital-Intensive IGAs</th>
<th>Labor-Intensive IGAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density 1990</td>
<td>36.21***</td>
<td>65.95***</td>
<td>22.36**</td>
</tr>
<tr>
<td></td>
<td>(4.82)</td>
<td>(5.35)</td>
<td>(2.51)</td>
</tr>
<tr>
<td>Fragmentation 1990</td>
<td>-0.27</td>
<td>-0.60</td>
<td>-0.53</td>
</tr>
<tr>
<td></td>
<td>(-.84)</td>
<td>(-1.31)</td>
<td>(-1.34)</td>
</tr>
<tr>
<td>IGA</td>
<td>-.06</td>
<td>-.64*</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>(-.30)</td>
<td>(-2.23)</td>
<td>(.78)</td>
</tr>
<tr>
<td>Annexation</td>
<td>1.09***</td>
<td>1.21***</td>
<td>1.14***</td>
</tr>
<tr>
<td></td>
<td>(4.12)</td>
<td>(3.06)</td>
<td>(3.33)</td>
</tr>
<tr>
<td>% of metro area population in cc 1980</td>
<td>-0.80</td>
<td>-0.27</td>
<td>-0.54</td>
</tr>
<tr>
<td></td>
<td>(-1.83)</td>
<td>(-.40)</td>
<td>(-1.02)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.64***</td>
<td>.05</td>
<td>0.94*</td>
</tr>
<tr>
<td></td>
<td>(5.30)</td>
<td>(.11)</td>
<td>(2.28)</td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>.04</td>
<td>.06</td>
<td>.02</td>
</tr>
<tr>
<td>N</td>
<td>144</td>
<td>144</td>
<td>144</td>
</tr>
</tbody>
</table>

*P < .05
**P < .01
***P < .001
### Table 5-2
Predicted Number of Local Intergovernmental Agreements

<table>
<thead>
<tr>
<th></th>
<th>Density 1990</th>
<th>Fragmentation 1990</th>
<th>IGA</th>
<th>Annex</th>
<th>% metro pop in center city</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total IGAs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>78.12</td>
<td>12.21</td>
<td>15.43</td>
<td>17.63</td>
<td>10.01</td>
</tr>
<tr>
<td>sd above</td>
<td>24.09</td>
<td>14.48</td>
<td>15.24</td>
<td>22.03</td>
<td>13.59</td>
</tr>
<tr>
<td>sd below</td>
<td>10.13</td>
<td>16.86</td>
<td>16.02</td>
<td>11.08</td>
<td>17.96</td>
</tr>
<tr>
<td>min</td>
<td>8.90</td>
<td>17.57</td>
<td>16.40</td>
<td>5.94</td>
<td>19.00</td>
</tr>
<tr>
<td>range</td>
<td>69.22</td>
<td>-5.36</td>
<td>-0.97</td>
<td>11.70</td>
<td>-8.99</td>
</tr>
<tr>
<td><strong>Capital-Intensive IGAs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>68.02</td>
<td>2.08</td>
<td>3.18</td>
<td>4.15</td>
<td>3.12</td>
</tr>
<tr>
<td>sd above</td>
<td>7.98</td>
<td>3.05</td>
<td>2.80</td>
<td>5.31</td>
<td>3.46</td>
</tr>
<tr>
<td>sd below</td>
<td>1.65</td>
<td>4.31</td>
<td>4.70</td>
<td>2.48</td>
<td>3.80</td>
</tr>
<tr>
<td>min</td>
<td>1.30</td>
<td>4.73</td>
<td>6.01</td>
<td>1.24</td>
<td>3.87</td>
</tr>
<tr>
<td>range</td>
<td>66.72</td>
<td>-2.65</td>
<td>-2.83</td>
<td>2.91</td>
<td>-.75</td>
</tr>
<tr>
<td><strong>Labor-Intensive IGAs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>20.80</td>
<td>4.73</td>
<td>8.02</td>
<td>8.73</td>
<td>5.69</td>
</tr>
<tr>
<td>sd above</td>
<td>10.06</td>
<td>6.62</td>
<td>8.34</td>
<td>11.01</td>
<td>7.00</td>
</tr>
<tr>
<td>sd below</td>
<td>5.89</td>
<td>8.95</td>
<td>7.11</td>
<td>5.38</td>
<td>8.46</td>
</tr>
<tr>
<td>min</td>
<td>5.44</td>
<td>9.71</td>
<td>6.59</td>
<td>2.81</td>
<td>8.79</td>
</tr>
<tr>
<td>range</td>
<td>15.36</td>
<td>-4.98</td>
<td>1.43</td>
<td>5.93</td>
<td>-3.11</td>
</tr>
</tbody>
</table>
Table 5-3
Negative Binomial Regression Models for the
Incidence of Category-Specific Intergovernmental Agreements

<table>
<thead>
<tr>
<th></th>
<th>Capital-Intensive</th>
<th>Labor-Intensive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AIR</td>
<td>COR</td>
</tr>
<tr>
<td>Dens</td>
<td>+**</td>
<td>+**</td>
</tr>
<tr>
<td>Frag</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IGA</td>
<td>-***</td>
<td>-</td>
</tr>
<tr>
<td>Annex</td>
<td>+</td>
<td>+**</td>
</tr>
<tr>
<td>% cc pop</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Con</td>
<td>-**</td>
<td>-**</td>
</tr>
<tr>
<td>Pseud R2</td>
<td>.16</td>
<td>.05</td>
</tr>
<tr>
<td>N</td>
<td>144</td>
<td>144</td>
</tr>
</tbody>
</table>

+- direction of coefficient
*P < .05, **P < .01, ***P < .001

AIR = airport  HSE = housing and community development  ADM = financial administration  FIR = fire
COR = corrections  SWR = sewage  GEN = general control  POL = police
HIG = highways  WST = solid waste management  WLF = public welfare  HLT = health
HOS = hospitals  NR = natural resources  LIB = libraries  ED = education
PRK = parks
Finally, Table 5-3 provides a summary of the negative binomial regressions for the category-specific intergovernmental agreements. It reports direction and significance of each coefficient for all seventeen types of intergovernmental agreements. These findings largely confirm those reported in Table 5-1. Density is significantly and positively related to all of the intergovernmental agreements classified as capital-intensive, but only to one intergovernmental agreement classified as labor-intensive. These findings, confirm that an increase in the geographic density of metropolitan area governments promotes local government cooperation, but its effect is strongest for capital-intensive goods and services. The impact of fragmentation is mixed. As predicted, it is negatively related to the incidence of most types of intergovernmental service agreements and its impact is largely insignificant. Surprisingly, fragmentation is negatively and significantly related to the incidence of police and housing intergovernmental agreements. It is not obvious what distinguishes these two policy categories. Overall, these findings provide little evidence for the expectation that fragmented local governments will cooperate in the provision of basic goods and services that provide little competitive advantage.

In sum, these analyses demonstrate that the geographic density of metropolitan area governments is an important determinant of the incidence of local intergovernmental agreements. But the impact of density is mediated by the economic attributes of local intergovernmental agreements. Density has its strongest impact on capital-intensive agreements. The pseudo R squares of the explanatory models are relatively low, but they do not negate the finding that the geographic density of metropolitan area governments has a significant influence on local government policy decisions.
Discussion

The empirical findings provide strong evidence that the geographic density of metropolitan area governments is a significant predictor of the incidence of local intergovernmental agreements, and its impact is significantly stronger for capital-intensive goods and services than for labor-intensive goods and services. It appears that an increase in the geographic density of metropolitan area governments increases the likelihood that policy spillovers (positive and negative) will impact multiple local communities. Local officials’ desire to contain these spillovers motivates local government officials to cooperate. Local governments want to minimize the number of communities free-riding on the positive externalities generated by some policies, as well as the number of communities paying the costs of negative externalities generated by other policies.

Local officials in metropolitan areas with geographically dense local governments are also more likely to use intergovernmental agreements to produce capital-intensive goods and services than labor-intensive goods and services. These communities are seeking to exploit the economies of scale associated with capital-intensive goods and services.

These findings demonstrate that previous research examining the relationship between metropolitan area fragmentation and the incidence of intergovernmental agreements relied on an incomplete measure of fragmentation. The geographic density of metropolitan area governments is far more important than the total number of governments per capita in explaining local government cooperation.
This conclusion has interesting implications for the impact of suburban sprawl on metropolitan area economic health. It suggests that a large number of suburban governments are not inherently bad for metropolitan areas. It is possible for geographically proximate fragmented metropolitan area governments to cooperate. An increase in the geographic concentration of local governments is an important determinant of local government cooperation and may actually generate positive synergies from fragmentation. Intergovernmental agreements are a viable alternative to consolidation, and local governments are more likely to engage in such agreements when they are geographically dense. Thus, the ideal location for new suburban areas is proximate to existing local governments and the center city. The findings in chapter 4 also support the conclusion that fragmentation is not inherently bad for the metropolitan area. It appears that center city/suburb income disparities that favor the suburbs may actually promote metropolitan area economic growth. These conclusions suggest that fragmentation is not the death knell of metropolitan area economic health, as previous research has predicted.

In summary, it appears that we need to rethink how we view the structure of metropolitan area government. It appears that the geographic relationship of local governments is much more important than the total per capita number of local governments in explaining local government cooperation.
Chapter 6

Conclusion

Center cities and their suburbs have long realized that they cannot live with each other nor can they live without each other. Because most suburban governments were established to allow individuals to reside outside the center city while continuing to work and recreate in the center city, the two areas are linked through the mobility of metropolitan area residents. Furthermore, center cities and their suburbs are economically linked by the larger state economy.

Ideally, center cities and their suburbs should cooperate in the provision and production of goods and services in order to increase policy effectiveness and efficiency. It is in the economic interest of both areas to coordinate their regional economic development activities as a way to promote metropolitan area economic health over individual city economic health. In practice, however, there is an underlying tension between center cities and their suburbs. Both areas have different constituencies with varying policy preferences. Suburban residents are more likely to be white, wealthy, and educated than their center city counterparts. These differences often translate into different policy preferences, which often make it difficult for center cities and their suburbs to cooperate.

This dissertation examined the economic and policy relationship between center cities and their suburbs, confirming that the two areas are economically linked and that it is in their mutual interest to cooperate in the production of some goods and services. One significant finding is the importance of the geographic relationship of general purpose
governments within a metropolitan area. The geographic relationship of metropolitan area governments is often a more important determinant of local government behavior than the total number of metropolitan area governments.

Empirical Findings and Conclusions

The empirical analysis in Chapter 3 concluded that center cities and their suburbs share an enduring economic bond. Between 1969 and 1989, changes in center city per capita income were positively and significantly related to changes in suburban per capita income. This relationship remains strong even after controlling for the influence of the state economy. The state economy has a strong impact on the economies of both center cities and their suburbs, but it is not the only determinant of this relationship. Its impact, however, has grown stronger over time: the state economy was a more significant determinant of changes in suburban per capita income in the 1980s than in the 1970s.

There are several explanations for this finding. First, the federal grant-in-aid monies dried up during the 1980s, forcing cities to shrink their budgets. Although the amount of state aid to local governments remained fairly constant during the 1980s, the proportion of government budgets from state aid grew. Second, the devolution revolution, launched by the Republicans in the 1980s, was designed to give power back to the states. The states were made responsible for a wide range of policies that had previously been handled by the federal government. This shift in federal policy increased the state’s role in the development and implementation in a large number of policy areas that directly impacted metropolitan area governments. Finally (and most importantly), the state’s role in economic development policy dramatically increased during the 1980s.
The findings in chapter 3 provided additional evidence that role of the state in local economic development grew during the 1980s.

Overall, this analysis demonstrates that the policy decisions of local governments should influence their economic fate. Center cities and suburbs that choose to coordinate their planning and policy decisions may be able to influence metropolitan area economic growth. The economic bond between center cities and their suburbs should provide a strong economic incentive for local government cooperation.

Establishing an economic bond between center cities and their suburbs provides a necessary, but not sufficient, justification for local government cooperation. Chapter 4 provided a more extensive examination of the center city/suburb economic relationship. It reported that suburban areas have grown substantially stronger than their center cities over the past 20 years. In 1970, 42% of metropolitan areas had suburban areas with per capita incomes that exceeded center city per capita incomes. By 1990, that number had jumped to 67%. This dramatic shift in the distribution of metropolitan area wealth indicates that the majority of local economic growth in the past 20 years has occurred in the suburbs. The wealthy are moving to (and remaining in) the suburbs. Furthermore, the per capita incomes of suburban residents have increased relative to those of center city residents. If this trend persists, very few metropolitan areas will be left with center cities that economically lead their suburbs.

This shift in the ratio of center city per capita income to suburban per capita income may indicate the rise of the suburbs as a regional economic engine. Traditionally, an economically strong center city was believed to be the key to metropolitan area growth. This expectation was confirmed in the 1970s; metropolitan area economic
growth was significantly and positively related to center city/suburban income disparities that favored the center city (i.e. center city per capita income was higher than suburban per capita income). In the 1980s, however, this relationship changed direction and metropolitan area economic growth was significantly and positively related to center city/suburban income disparities that favored the suburbs. Contrary to the predictions of previous studies, the empirical evidence suggests that during the 1980s a stronger suburban economy, rather than a stronger center city economy, became the key to metropolitan area economic growth.

This finding suggests that the center city may be fading as the dominant regional economic engine. It also suggests that it may be possible to have a strong metropolitan area economy and a relatively weak center city – contrary to all prior expectations in the literature. Further research is necessary to fully explain this unexpected finding. The 2000 Census data should allow us to determine if the findings from the 1980s are anomalous, or if there has been a dramatic shift in the economic role of the suburbs versus the center city. If such a shift has taken place, it will be necessary to rethink previous policy recommendations that emphasized strengthening the center city economy at the expense of the suburban economy. If the center city has truly faded as the economic engine of the metropolitan area, then policy proposals to expand the boundaries of the center city (Rusk 1993) may not have the desired economic impact. More research is necessary before metropolitan area governments adopt sweeping policy changes designed to alter the economic balance of power between the center city and its suburbs.

The empirical analysis in Chapter 4 also provides insight into the relationship between center city/suburban income disparity and the structure of metropolitan area
government. Fragmented metropolitan area government is often cited as one important determinant of center city/suburban income disparities that favor the suburbs. Fragmented metropolitan areas are believed to provide numerous residential options, which facilitated the exodus of the wealthy from the center city. As the number of wealthy metropolitan area residents living in the suburbs grew, so did suburban per capita income relative to center city per capita income. Consolidated metropolitan area government is often touted as the most effective way of reducing center city/suburban income disparities because it forces the wealthy and the poor to reside under the jurisdiction of a single government.

The empirical findings in Chapter 4 call into question policy recommendations based solely on reducing the number of metropolitan area governments as a way of reducing center city/suburban income disparities and promoting metropolitan area economic growth. Chapter 4 demonstrates that previous research attempting to link metropolitan area government structure and center city/suburb income disparity does not properly conceptualize metropolitan area government fragmentation. Most previous research focuses on the impact of the total number of metropolitan area governments per capita and ignores the influence of the geographic relationship among metropolitan area governments. Yet the empirical findings in Chapter 4 reveal that the geographic concentration of metropolitan area governments is a more important determinant of center city/suburb income disparity than the total number of metropolitan area governments.

As the number of general purpose governments per square mile (i.e. density) increases, the ratio of center city per capita income to suburban per capita income shifts
to favor the suburbs. In contrast, as the total number of local governments per 10,000 population (i.e. fragmentation) increases, the ratio of center city per capita income to suburban per capita income shifts to favor the center city. A closer look at these disparate relationships reveals that fragmentation has little substantive impact on center city/suburb income disparity, while density has a dramatic impact. The bivariate plots of these relationships reveal that the relationship between fragmentation and center city/suburb income disparity is relatively flat, whereas the relationship between density and center city/suburb income disparity is significant and negative (see figures 4-1 to 4-6). It appears that we need to rethink our conceptualization of metropolitan area government fragmentation. Future research examining the impact of metropolitan area government fragmentation should account for both the total number of metropolitan area governments per capita and the geographic density of metropolitan area governments. Each concept of metropolitan area government fragmentation provides insight into the economic relationships among metropolitan area governments, as well the policy decisions made by those governments.

Chapter 5 examined the relationship between metropolitan area government structure (fragmentation and density) and the incidence of local intergovernmental agreements. It tested the theory of institutional collective action outlined in Chapter 2 by examining the determinants of metropolitan area government cooperation. The empirical findings challenge an important assumption regarding the impact of fragmented local government. The consensus among previous research on fragmented metropolitan area governments is that fragmentation generates competition among local governments and that it is unlikely fragmented local governments will cooperate. The findings in chapter 5
suggest that it is possible for fragmented local governments to cooperate as well as compete. This relationship only becomes clear when examining both components of metropolitan area government fragmentation: the geographic density of metropolitan area general purpose governments and the number of metropolitan area general purpose governments per capita. An increase in the geographic density of general purpose metropolitan area governments lead to an increase in the number of local intergovernmental agreements. In contrast, the number of general purpose metropolitan area governments per 10,000 population has a negative (but not significant) impact on the incidence of local intergovernmental agreements. The latter confirms Morgan and Mareschal’s (1999) findings that metropolitan area fragmentation (i.e. number of governments per 100,000) is not significantly related to local intergovernmental services agreements. Collectively, these findings provide further evidence of the importance of considering both the geographic density of metropolitan area governments and the total number of metropolitan area governments per capita when examining the impact of fragmentation on local government policy decisions.

The analysis in Chapter 5 also confirms that the economic attributes of the goods and services that are collectively provided by metropolitan area governments mediates the relationship between the geographic density of metropolitan area governments and the incidence of local intergovernmental agreements. The impact of density is substantively greater for capital-intensive goods and services than for labor-intensive goods and services. Local government officials are more likely to cooperate in the production of capital-intensive goods and services in order to realize the benefits of economies of scale and to contain potential policy spillovers (positive and negative) that
affect multiple communities. It appears that local officials in geographically dense metropolitan areas are more likely to use local intergovernmental agreements when they can realize economic benefits from cooperation.

Collectively, the empirical findings from Chapters 3, 4, and 5 have direct implications for policy recommendations aimed at curtailing suburban sprawl. They suggest that metropolitan area government fragmentation is not detrimental to metropolitan area economic health, as previous research has predicted. Thus, economically there is little reason to curtail the number of metropolitan area governments. What is important is the geographic distribution of metropolitan area governments. An increase in the geographic density of metropolitan area governments increases the likelihood of local intergovernmental agreements. It is possible that this cooperation will have a positive impact on metropolitan area economic growth and mitigate some service inequalities across multiple jurisdictions.

Future Research

The empirical analysis in this dissertation provides some insight into the role of metropolitan area government structure on center city/suburban economic and policy relationships, but it generates as many questions as it answers. Four areas worthy of further examination are measuring the geographic density of metropolitan area genera purpose governments, the role of the state economy, the relationship between center city and suburban income disparity and metropolitan area economic growth, the impact of intergovernmental agreements.

The empirical analysis in Chapter 4 and 5 demonstrate the impact of the geographic concentration of metropolitan area governments on center city/suburb income
disparities and the incidence of local intergovernmental service agreements at the metropolitan area level. A more complete measure of the geographic density of metropolitan area governments is necessary to fully understand these relationships. The current measure is not ideal, as it does not account for the exact geographic distribution of local governments within a metropolitan area. This measure has the problem of assigning two metropolitan areas with same total land area and the same number of local governments the same score, regardless of the specific location of those local governments within a metropolitan area. For example, MSA\textsubscript{1} and MSA\textsubscript{2} may each be 100 square miles and have 5 local governments. In MSA\textsubscript{1} all 5 governments may all share boundaries, while in MSA\textsubscript{2} they may be evenly distributed throughout the county. The likelihood of policy spillovers and intergovernmental cooperation should be higher in MSA\textsubscript{1} than in MSA\textsubscript{2}. The current measure of the geographic density of metropolitan area governments does not account for these differences. The ideal measure of the geographic density of metropolitan area general purpose governments would use geographic information system (GIS) maps to calculate the distance between the center points of each local government in a metropolitan area. At this time such GIS data are not readily available for a majority of metropolitan area. Future research should examine a more precise definition of the geographic density of metropolitan area governments.

Another important piece of information for future research is the geographic distribution of the residential population within individual metropolitan area general purpose governments. The likelihood of local intergovernmental cooperation may increase as the density of local government population increases. The potential impact of policy spillovers increases as population density increases. Future research should
examine the impact of local government land use control policies on the physical
distribution of residential populations. Local government with geographically dense
populations may be more likely to recognize the impact of policy spillovers and thus be
more likely to cooperate with other local governments.

It is evident that the state economy is an important determinant of center
city/suburban economic ties. Inevitably, the economic forces impacting the state trickle
down to the local economy. The question remains, however, how significant is the
influence of the state economy on the economic relationship between center cities and
their suburbs? If the findings from Chapter 3 are correct and the influence of the state
economy is growing, future research should determine the potential magnitude of this
growth. Is it possible that over time the independent economic bond between center
cities and their suburbs will fade? If so, local governments may decide it is no longer
worth the resources to promote local government cooperation and to implement local
economic development policies. Data from the 2000 Census should provide greater
insight into these questions and help determine if the findings of this dissertation indicate
a real trend or an anomaly.

The impact of center city/suburban per capita income disparity on metropolitan
area economic growth also merits further attention. It is possible that the center city has
been replaced by the suburbs as the regional economic engine. Consequently, it may not
be in the economic interest of metropolitan area governments to embrace policies that
favor the development of the center city over the suburbs. If the 2000 Census data
confirm that metropolitan area economic growth is significantly related to center
city/suburban income disparities that favor the suburbs, many current policy
recommendations targeted at economically promoting the center city should be reconsidered. Recommendations by Rusk (1993, 1999), Downs (1994), and Dreier, Mollenkopf, and Swanstrom (2001) aimed at promoting center city economic health at the expense of the suburbs may no longer be in the economic interest of the metropolitan area. Future research is necessary to fully understand the economic impact of center city/suburban income disparity.

At a minimum, the mixed findings in Chapter 4 demonstrate that more research is necessary before national, state, and local governments embrace policies designed to alter existing structures of metropolitan area government. Policies targeted at local government consolidation and center city expansion may actually be economically disadvantageous to the economic health of metropolitan areas.

The final area for future research is an examination of the impact of metropolitan area government cooperation on the metropolitan area economy. The analysis in Chapter 5 demonstrates that it is possible for fragmented local governments to cooperate, but it does not address the potential impact of that cooperation. It is possible that metropolitan area government cooperation positively impacts metropolitan area economic growth. Local intergovernmental service agreements may lead to more cost-effective service production that translates into economic growth. At a minimum, local intergovernmental service agreements may lead to the perception of cost-efficient service provision. The appearance of efficiency may make the metropolitan area more attractive to productive capital and labor, resulting in increased metropolitan area economic growth. Future research should fully examine this relationship.
Another aspect of local intergovernmental cooperation that deserves more analysis is the potential to use these intergovernmental agreements to promote service equity (as well as efficiency) across metropolitan area governments. Local intergovernmental service agreements may be used to realize the economic benefits of cooperation (e.g. economies of scale) as well as the social benefits of cooperation (e.g. reduced service inequalities). It may be possible for fragmented local governments use intergovernmental service agreements to minimize service inequalities, addressing social concerns raised by the social stratification government inequality (SSGI) hypotheses (Hill 1974, Lowery 1998). As stated in Chapter 1, the SSGI hypothesis argues that fragmented local government leads to residential patterns that “systematically deprive minorities and the poor of access to the resources needed to address fundamental social problems” (Lowery 1998:3). A key assumption of the SSGI hypothesis is that local governments do not cooperate in the production of goods and services, thereby equalizing resources available in multiple communities.

The empirical analysis in Chapter 5 demonstrates that fragmented local governments can and will cooperate in the production of some goods and services. For the most part, this voluntary cooperation appears to be limited to policies that generate economic benefits, rather than equity benefits, for the cooperating communities. Institutional collective action is most likely when each government participating in the group receives equal benefits from participation. Consequently, fragmented metropolitan area governments are less likely to cooperate in the production of goods and services when to do so would require redistributing wealth from one community to another. It may be possible, however, to induce local governments use local intergovernmental
service agreements to promote service equity through state and national policy incentives. Future research should examine the possibility of using local intergovernmental agreements to promote service equity, as well as efficiency, across local governments. It should identify factors that would promote local government cooperation on a variety of policies.

Overall, the current empirical research establishes that center cities and their suburbs are economically linked. The relative income disparity between the two areas is influenced by the structure of metropolitan area government. Both the total number of metropolitan area general purpose governments and the geographic concentration of metropolitan area general purpose governments influence the direction of the ratio of center city/suburban per capita income, but the geographic concentration of metropolitan area governments is the more important determinant of center city/suburban income disparity. In addition, the ratio of center city to suburban per capita income impacts overall metropolitan area economic growth. Finally, it is possible for local governments in fragmented metropolitan areas to cooperate. Future research should fully examine the economic impact of metropolitan area government cooperation on the metropolitan area economy, and should more fully address the questions of policy efficiency and equity that are raised by the findings of this dissertation.
Bibliography


____. 1983. County and City Data Book. Washington, D.C.

1972. County and City Data Book. Washington, D.C.


Appendix A

Metropolitan Statistical Area Data

**Definition of Metropolitan Statistical Area**

MSAs are defined using the 1999 Census definition of metropolitan areas. The same counties and center cities are examined in each decade, even if the census MSA definition was revised during that period. For example, in 1970 the Houston MSA includes five counties, whereas in 1999 the Houston MSA included six counties. For purposes of this analysis, the Houston MSA was defined using six counties for 1969-1990. Using a consistent MSA definition over time allows for a consistent comparison of the impact of geography.

The 152 MSAs included in this study are not the universe of MSAs with 1990 populations exceeding 250,000. MSAs meeting the population criteria were excluded for several reasons. First, census data was not available for the center city of some MSAs. This lack of data was problematic, because the suburb variables were created by subtracting the center city data from the county data aggregated to the metropolitan area level. Second, most of the New England MSAs were excluded because they are defined using townships rather than counties. Many New England MSAs include portions of numerous counties rather than entire counties. This anomaly makes it difficult to compare the New England metropolitan statistical areas to other metropolitan statistical areas.
Sample of Metropolitan Statistical Areas

All of the empirical analysis uses data from 152 metropolitan statistical areas with 1990 populations over 250,000. The study examines MSAs with populations over 250,000 for three reasons. 1) Most previous research regarding the economic relationship between center cities and their suburbs focuses on large MSAs, 2) larger MSAs tend to be more stable over time, whereas smaller MSAs are more likely to be new, making it difficult to fully assess this relationship across time, and 3) most of nation's population resides in larger metropolitan areas.

Constant Dollars

Finally, all income measures have been converted to constant 1989 dollars using the consumer price index deflator (CPI-U-X1) (http://www.ssc.wis.edu 2000).
## Appendix B
### Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center City pc income 1969</td>
<td>151</td>
<td>4679.90</td>
<td>13967.31</td>
<td>9715.12</td>
<td>1361.75</td>
</tr>
<tr>
<td>Center City pc income 1979</td>
<td>150</td>
<td>6918.86</td>
<td>16341.19</td>
<td>11746.49</td>
<td>1745.75</td>
</tr>
<tr>
<td>Center City pc income 1989</td>
<td>152</td>
<td>6248.00</td>
<td>19814.00</td>
<td>13034.32</td>
<td>2434.64</td>
</tr>
<tr>
<td>Suburban pc income 1969</td>
<td>151</td>
<td>4213.08</td>
<td>14857.51</td>
<td>9504.57</td>
<td>1811.28</td>
</tr>
<tr>
<td>Suburban pc income 1979</td>
<td>150</td>
<td>5936.28</td>
<td>18639.94</td>
<td>12420.82</td>
<td>1997.77</td>
</tr>
<tr>
<td>Suburban pc income 1989</td>
<td>152</td>
<td>5736.84</td>
<td>24270.65</td>
<td>14484.86</td>
<td>3015.89</td>
</tr>
<tr>
<td>Metro area pc income 1969</td>
<td>152</td>
<td>4664.16</td>
<td>13946.96</td>
<td>9613.81</td>
<td>1446.29</td>
</tr>
<tr>
<td>Metro area pc income 1979</td>
<td>152</td>
<td>6769.73</td>
<td>17219.54</td>
<td>12239.18</td>
<td>1606.69</td>
</tr>
<tr>
<td>Metro area pc income 1989</td>
<td>152</td>
<td>6630.00</td>
<td>22049.17</td>
<td>14121.09</td>
<td>2390.79</td>
</tr>
<tr>
<td>Variable</td>
<td>N</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----</td>
<td>---------</td>
<td>---------</td>
<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>Change in center city pc income 1969-1979</td>
<td>150</td>
<td>-.03</td>
<td>.66</td>
<td>.21</td>
<td>.10</td>
</tr>
<tr>
<td>Change in center city pc income 1979-1989</td>
<td>150</td>
<td>-.14</td>
<td>.39</td>
<td>.11</td>
<td>.11</td>
</tr>
<tr>
<td>Change in suburban pc income 1969-1979</td>
<td>150</td>
<td>.12</td>
<td>.78</td>
<td>.32</td>
<td>.11</td>
</tr>
<tr>
<td>Change in suburban pc income 1979-1989</td>
<td>150</td>
<td>-.15</td>
<td>.43</td>
<td>.16</td>
<td>.11</td>
</tr>
<tr>
<td>Change Metro area pc income 1969-1979</td>
<td>152</td>
<td>.07</td>
<td>.73</td>
<td>.28</td>
<td>.08</td>
</tr>
<tr>
<td>Change Metro area pc income 1979-1989</td>
<td>152</td>
<td>-.08</td>
<td>.40</td>
<td>.15</td>
<td>.10</td>
</tr>
<tr>
<td>Change in state pc income 1969-1979</td>
<td>150</td>
<td>.11</td>
<td>.47</td>
<td>.27</td>
<td>.08</td>
</tr>
<tr>
<td>Change in state pc income 1979-1989</td>
<td>150</td>
<td>-.01</td>
<td>.37</td>
<td>.16</td>
<td>.08</td>
</tr>
<tr>
<td>Change pc per capita income net of metro area 1969-1979</td>
<td>152</td>
<td>.10</td>
<td>.54</td>
<td>.28</td>
<td>.08</td>
</tr>
<tr>
<td>Change in state pc income net of metro area 1979-1989</td>
<td>152</td>
<td>-.03</td>
<td>.38</td>
<td>.15</td>
<td>.09</td>
</tr>
<tr>
<td>Variable</td>
<td>N</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>----------</td>
<td>-----</td>
<td>---------</td>
<td>---------</td>
<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>Ratio cc/sub pc income 1970</td>
<td>151</td>
<td>.59</td>
<td>1.66</td>
<td>1.05</td>
<td>.18</td>
</tr>
<tr>
<td>Ratio cc/sub pc income 1980</td>
<td>150</td>
<td>.49</td>
<td>1.60</td>
<td>.96</td>
<td>.18</td>
</tr>
<tr>
<td>Dummy center city pc income &gt; suburban pc income 1970</td>
<td>151</td>
<td>0</td>
<td>1</td>
<td>.58</td>
<td>.49</td>
</tr>
<tr>
<td>Dummy center city pc income &gt; suburban pc income 1980</td>
<td>150</td>
<td>0</td>
<td>1</td>
<td>.38</td>
<td>.49</td>
</tr>
<tr>
<td>Fragmentation 1970</td>
<td>152</td>
<td>.05</td>
<td>1.36</td>
<td>.54</td>
<td>.30</td>
</tr>
<tr>
<td>Fragmentation 1980</td>
<td>152</td>
<td>.05</td>
<td>1.34</td>
<td>.51</td>
<td>.29</td>
</tr>
<tr>
<td>Fragmentation 1990</td>
<td>152</td>
<td>.01</td>
<td>1.37</td>
<td>.45</td>
<td>.28</td>
</tr>
<tr>
<td>Fragmentation * change in cc income 1970</td>
<td>150</td>
<td>-.01</td>
<td>.62</td>
<td>.11</td>
<td>.10</td>
</tr>
<tr>
<td>Fragmentation * change in cc income 1980</td>
<td>150</td>
<td>-.08</td>
<td>.23</td>
<td>.04</td>
<td>.05</td>
</tr>
<tr>
<td>Density 1970</td>
<td>152</td>
<td>.00</td>
<td>.06</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Density 1980</td>
<td>152</td>
<td>.00</td>
<td>.06</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>Density 1990</td>
<td>152</td>
<td>.00</td>
<td>.06</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>Density * change in cc income 1970</td>
<td>150</td>
<td>.00</td>
<td>.01</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Density * change in cc income 1980</td>
<td>150</td>
<td>.00</td>
<td>.02</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>
### Appendix B

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro area population 1970</td>
<td>152</td>
<td>78871</td>
<td>9075554</td>
<td>833943</td>
<td>1229480</td>
</tr>
<tr>
<td>Metro area population 1980</td>
<td>152</td>
<td>151196</td>
<td>8274961</td>
<td>927804</td>
<td>1224232</td>
</tr>
<tr>
<td>Metro area population 1990</td>
<td>152</td>
<td>250454</td>
<td>8863164</td>
<td>1047801</td>
<td>1335026</td>
</tr>
<tr>
<td>Change metro area population 1970-1980</td>
<td>152</td>
<td>-.09</td>
<td>.95</td>
<td>.20</td>
<td>.19</td>
</tr>
<tr>
<td>Change metro area population 1980-1990</td>
<td>152</td>
<td>-.09</td>
<td>.66</td>
<td>.15</td>
<td>.16</td>
</tr>
<tr>
<td>% of metro area population in cc 1970</td>
<td>151</td>
<td>.09</td>
<td>.90</td>
<td>.37</td>
<td>.17</td>
</tr>
<tr>
<td>% of metro area population in cc 1980</td>
<td>150</td>
<td>.08</td>
<td>.89</td>
<td>.33</td>
<td>.17</td>
</tr>
<tr>
<td>% metro area pop over 25yrs of age with college ed 1970</td>
<td>152</td>
<td>.01</td>
<td>.42</td>
<td>.07</td>
<td>.05</td>
</tr>
<tr>
<td>% metro area pop over 25yrs of age with college ed 1980</td>
<td>152</td>
<td>.03</td>
<td>.38</td>
<td>.10</td>
<td>.04</td>
</tr>
<tr>
<td>% metro area population black 1970</td>
<td>152</td>
<td>.00</td>
<td>.40</td>
<td>.11</td>
<td>.09</td>
</tr>
<tr>
<td>% metro area population black 1980</td>
<td>152</td>
<td>.00</td>
<td>.41</td>
<td>.12</td>
<td>.10</td>
</tr>
</tbody>
</table>
### Appendix B

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>% center city population black 1970</td>
<td>143</td>
<td>.01</td>
<td>.71</td>
<td>.19</td>
<td>.14</td>
</tr>
<tr>
<td>% center city population black 1980</td>
<td>150</td>
<td>.00</td>
<td>.71</td>
<td>.22</td>
<td>.17</td>
</tr>
<tr>
<td>Annex</td>
<td>144</td>
<td>0</td>
<td>1</td>
<td>.89</td>
<td>.32</td>
</tr>
<tr>
<td>IGA</td>
<td>144</td>
<td>0</td>
<td>1</td>
<td>.79</td>
<td>.41</td>
</tr>
<tr>
<td>Midwest</td>
<td>152</td>
<td>0</td>
<td>1</td>
<td>.22</td>
<td>.42</td>
</tr>
<tr>
<td>Northeast</td>
<td>152</td>
<td>0</td>
<td>1</td>
<td>.14</td>
<td>.35</td>
</tr>
<tr>
<td>South</td>
<td>152</td>
<td>0</td>
<td>1</td>
<td>.41</td>
<td>.49</td>
</tr>
<tr>
<td>West</td>
<td>152</td>
<td>0</td>
<td>1</td>
<td>.22</td>
<td>.42</td>
</tr>
</tbody>
</table>

<p>| 1992 Intergovernmental Agreements             |    |         |         |      |                |
| Total                                         | 152| 0       | 157     | 18.04| 20.43          |
| Capital Intensive                             | 152| 0       | 60      | 5.01 | 8.64           |
| Labor Intensive                               | 152| 0       | 70      | 8.29 | 10.03          |
| Financial Administration                      | 152| 0       | 35      | 1.45 | 4.77           |
| Airport                                       | 152| 0       | 4       | 0.14 | 0.58           |
| Parking                                       | 152| 0       | 1       | 0.03 | 0.16           |
| Corrections                                   | 152| 0       | 10      | 0.55 | 1.45           |
| Education                                     | 152| 0       | 16      | 1.76 | 2.98           |
| Fire                                          | 152| 0       | 11      | 0.76 | 1.65           |</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Control</td>
<td>152</td>
<td>0</td>
<td>5</td>
<td>0.32</td>
<td>0.83</td>
</tr>
<tr>
<td>Health</td>
<td>152</td>
<td>0</td>
<td>22</td>
<td>1.55</td>
<td>3.31</td>
</tr>
<tr>
<td>Hospitals</td>
<td>152</td>
<td>0</td>
<td>6</td>
<td>0.12</td>
<td>0.59</td>
</tr>
<tr>
<td>Housing &amp; Community Development</td>
<td>152</td>
<td>0</td>
<td>6</td>
<td>0.35</td>
<td>0.72</td>
</tr>
<tr>
<td>Libraries</td>
<td>152</td>
<td>0</td>
<td>15</td>
<td>0.93</td>
<td>1.93</td>
</tr>
<tr>
<td>General Gov NEC</td>
<td>152</td>
<td>0</td>
<td>44</td>
<td>4.74</td>
<td>6.63</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>152</td>
<td>0</td>
<td>3</td>
<td>0.20</td>
<td>0.54</td>
</tr>
<tr>
<td>Police</td>
<td>152</td>
<td>0</td>
<td>25</td>
<td>1.22</td>
<td>3.05</td>
</tr>
<tr>
<td>Parks</td>
<td>152</td>
<td>0</td>
<td>10</td>
<td>0.42</td>
<td>1.02</td>
</tr>
<tr>
<td>Protective Inspection</td>
<td>152</td>
<td>0</td>
<td>2</td>
<td>0.03</td>
<td>0.20</td>
</tr>
<tr>
<td>Sewerage</td>
<td>152</td>
<td>0</td>
<td>40</td>
<td>1.74</td>
<td>4.41</td>
</tr>
<tr>
<td>Public Welfare</td>
<td>152</td>
<td>0</td>
<td>14</td>
<td>0.28</td>
<td>1.20</td>
</tr>
<tr>
<td>Water Transport</td>
<td>152</td>
<td>0</td>
<td>2</td>
<td>0.01</td>
<td>0.16</td>
</tr>
<tr>
<td>Solid Waste Management</td>
<td>152</td>
<td>0</td>
<td>16</td>
<td>0.52</td>
<td>1.52</td>
</tr>
</tbody>
</table>
### Appendix C-1
Regression Estimates for the Change in Suburban Per Capita Income with Regional Control Variables: 1969-1979 (t-value)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1a</th>
<th>Model 2a</th>
<th>Model 3a</th>
<th>Model 4a</th>
<th>Model 5a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.18***</td>
<td>.09**</td>
<td>.12***</td>
<td>.18***</td>
<td>.14***</td>
</tr>
<tr>
<td></td>
<td>(8.27)</td>
<td>(2.74)</td>
<td>(3.76)</td>
<td>(4.06)</td>
<td>(3.63)</td>
</tr>
<tr>
<td>Change in center city per capita income</td>
<td>.65***</td>
<td>.48***</td>
<td>.57***</td>
<td>.33*</td>
<td>.49***</td>
</tr>
<tr>
<td></td>
<td>(8.67)</td>
<td>(5.52)</td>
<td>(6.93)</td>
<td>(2.10)</td>
<td>(3.67)</td>
</tr>
<tr>
<td>Change in state per capita income</td>
<td>.49***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(3.42)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in state per capita income net of msa</td>
<td>.28**</td>
<td>.27*</td>
<td>.33**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.14)</td>
<td>(2.06)</td>
<td>(2.45)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Government Fragmentation</td>
<td>- .08</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(-1.52)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fragmentation</td>
<td>.42</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(1.85)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Government Density</td>
<td>-1.56</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(-1.20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density change in cc income</td>
<td>3.41</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(.47)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>.01</td>
<td>.00</td>
<td>.00</td>
<td>-.00</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>(3.05)</td>
<td>(.13)</td>
<td>(.23)</td>
<td>(-.15)</td>
<td>(.85)</td>
</tr>
<tr>
<td>Northeast</td>
<td>-.03</td>
<td>-.01</td>
<td>-.01</td>
<td>-.02</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>(-1.05)</td>
<td>(-.31)</td>
<td>(-.55)</td>
<td>(-.69)</td>
<td>(.22)</td>
</tr>
<tr>
<td>South</td>
<td>.02</td>
<td>-.02</td>
<td>-.00</td>
<td>-.01</td>
<td>-.00</td>
</tr>
<tr>
<td></td>
<td>(1.11)</td>
<td>(-.82)</td>
<td>(-.12)</td>
<td>(-.27)</td>
<td>(-.12)</td>
</tr>
<tr>
<td>R-square</td>
<td>.48</td>
<td>.52</td>
<td>.49</td>
<td>.50</td>
<td>.49</td>
</tr>
<tr>
<td>N</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01, ***P < .001
### Appendix C-2

Regression Estimates for the Change in Suburban Per Capita Income with Regional Control Variables: 1979-1989

(t-value)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1b</th>
<th>Model 2b</th>
<th>Model 3b</th>
<th>Model 4b</th>
<th>Model 5b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.08***</td>
<td>.02</td>
<td>.03</td>
<td>.05**</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>(5.34)</td>
<td>(1.00)</td>
<td>(1.78)</td>
<td>(2.58)</td>
<td>(.28)</td>
</tr>
<tr>
<td>Change in center city per capita income</td>
<td>.70***</td>
<td>.45***</td>
<td>.54***</td>
<td>.55***</td>
<td>.61***</td>
</tr>
<tr>
<td></td>
<td>(10.86)</td>
<td>(6.52)</td>
<td>(8.31)</td>
<td>(5.17)</td>
<td>(5.63)</td>
</tr>
<tr>
<td>Change in state per capita income</td>
<td></td>
<td>.63***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(6.44)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in state per capita income net of msa</td>
<td></td>
<td></td>
<td>.48***</td>
<td>.41***</td>
<td>.51***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(5.37)</td>
<td>(4.33)</td>
<td>(5.60)</td>
</tr>
<tr>
<td>Local Government Fragmentation</td>
<td></td>
<td></td>
<td></td>
<td>-.06*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-1.99)</td>
<td></td>
</tr>
<tr>
<td>Fragmentation</td>
<td></td>
<td></td>
<td>-.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-.25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Government Density Density * change in cc income</td>
<td></td>
<td></td>
<td></td>
<td>2.00**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2.59)</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>.02</td>
<td>.00</td>
<td>.03</td>
<td>.05**</td>
<td>-.00</td>
</tr>
<tr>
<td></td>
<td>(.91)</td>
<td>(1.41)</td>
<td>(1.51)</td>
<td>(2.58)</td>
<td>(-0.01)</td>
</tr>
<tr>
<td>Northeast</td>
<td>.07***</td>
<td>-.00</td>
<td>.01</td>
<td>.05</td>
<td>-.02</td>
</tr>
<tr>
<td></td>
<td>(3.17)</td>
<td>(-.08)</td>
<td>(.55)</td>
<td>(1.90)</td>
<td>(-.68)</td>
</tr>
<tr>
<td>South</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td>.00</td>
<td>-.02</td>
</tr>
<tr>
<td></td>
<td>(-.57)</td>
<td>(-.75)</td>
<td>(-.83)</td>
<td>(.09)</td>
<td>(-1.29)</td>
</tr>
<tr>
<td>R-square</td>
<td>.51</td>
<td>.61</td>
<td>.59</td>
<td>.60</td>
<td>.60</td>
</tr>
<tr>
<td>N</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01, ***P < .001
### Appendix D-1
Negative Binomial Regression Models for the Incidence of Capital-Intensive Intergovernmental Agreements

(z score)

<table>
<thead>
<tr>
<th></th>
<th>AIR</th>
<th>COR</th>
<th>HIG</th>
<th>HOS</th>
<th>HSE</th>
<th>SWR</th>
<th>WST</th>
<th>NR</th>
<th>PRK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>91.60** (2.68)</td>
<td>60.91** (2.54)</td>
<td>44.59** (2.94)</td>
<td>70.65* (2.06)</td>
<td>50.63*** (4.33)</td>
<td>83.87*** (4.57)</td>
<td>55.37** (2.57)</td>
<td>54.02*** (3.28)</td>
<td>37.30** (2.50)</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>-.21 (.15)</td>
<td>-1.71 (-1.64)</td>
<td>-.30 (-.50)</td>
<td>-1.85 (-1.18)</td>
<td>-2.46*** (-3.74)</td>
<td>-.31 (-.46)</td>
<td>-.93 (-1.10)</td>
<td>-1.18 (-1.41)</td>
<td>-.29 (-.42)</td>
</tr>
<tr>
<td>IGA</td>
<td>-3.13*** (-3.39)</td>
<td>-.99 (-1.67)</td>
<td>-.57 (-1.25)</td>
<td>-3.49*** (-4.13)</td>
<td>.19 (.33)</td>
<td>-.12 (-.26)</td>
<td>-1.58** (-3.10)</td>
<td>1.39 (1.45)</td>
<td>-.81 (-1.76)</td>
</tr>
<tr>
<td>Annex</td>
<td>2.74* (1.94)</td>
<td>2.93** (2.32)</td>
<td>2.46** (2.72)</td>
<td>17.61 (0.01)</td>
<td>.11 (.15)</td>
<td>2.21** (2.49)</td>
<td>2.15** (2.50)</td>
<td>-2.21** (-2.67)</td>
<td>.25 (.41)</td>
</tr>
<tr>
<td>% cc pop</td>
<td>-1.98 (-.83)</td>
<td>.99 (.76)</td>
<td>-2.36* (-2.19)</td>
<td>-1.34 (-.65)</td>
<td>-1.55 (-1.58)</td>
<td>-1.07 (-.98)</td>
<td>-1.14 (-.86)</td>
<td>-1.38 (-.86)</td>
<td>-1.60 (-.55)</td>
</tr>
<tr>
<td>Con</td>
<td>-3.57** (-2.56)</td>
<td>-3.24** (-2.64)</td>
<td>-2.06** (-2.43)</td>
<td>-17.52 (-.01)</td>
<td>-.74 (-1.37)</td>
<td>-2.83** (-3.12)</td>
<td>-1.83* (2.22)</td>
<td>-1.31* (-2.02)</td>
<td>-1.48 (-1.48)</td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>.16</td>
<td>.05</td>
<td>.07</td>
<td>.22</td>
<td>.11</td>
<td>.10</td>
<td>.07</td>
<td>.10</td>
<td>.04</td>
</tr>
</tbody>
</table>

N | 144 | 144 | 144 | 144 | 144 | 144 | 144 | 144 | 144 |

*P < .05, **P < .01, ***P < .001

AIR airport, COR corrections, HIG highways, HOS hospitals, PRK parks, SWR sewage, WST solid waste, NR natural resources, HSE housing and community development
### Appendix D-2
Negative Binomial Regression Models for the Incidence of Labor-Intensive Intergovernmental Agreements

(z score)

<table>
<thead>
<tr>
<th></th>
<th>ADM</th>
<th>GEN</th>
<th>WLF</th>
<th>LIB</th>
<th>FIR</th>
<th>POL</th>
<th>HLT</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>51.52*</td>
<td>14.18</td>
<td>34.11</td>
<td>-5.13</td>
<td>25.75</td>
<td>12.86</td>
<td>29.55</td>
<td>13.69</td>
</tr>
<tr>
<td></td>
<td>(2.09)</td>
<td>(.58)</td>
<td>(1.55)</td>
<td>(-.31)</td>
<td>(1.45)</td>
<td>(.81)</td>
<td>(1.58)</td>
<td>(1.08)</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>.03</td>
<td>1.22</td>
<td>-1.29</td>
<td>-.36</td>
<td>-.09</td>
<td>-2.10***</td>
<td>.09</td>
<td>-.63</td>
</tr>
<tr>
<td></td>
<td>(.03)</td>
<td>(.93)</td>
<td>(-1.23)</td>
<td>(-.53)</td>
<td>(-.11)</td>
<td>(-3.23)</td>
<td>(.09)</td>
<td>(-1.11)</td>
</tr>
<tr>
<td>IGA</td>
<td>1.58</td>
<td>-.43</td>
<td>-2.12***</td>
<td>-.68</td>
<td>.87</td>
<td>.87</td>
<td>-.10</td>
<td>.11</td>
</tr>
<tr>
<td></td>
<td>(1.67)</td>
<td>(-.66)</td>
<td>(-4.01)</td>
<td>(-1.49)</td>
<td>(.17)</td>
<td>(1.52)</td>
<td>(-.20)</td>
<td>(.32)</td>
</tr>
<tr>
<td>Annex</td>
<td>1.95</td>
<td>.34</td>
<td>2.67**</td>
<td>1.97**</td>
<td>1.05</td>
<td>1.67</td>
<td>1.48*</td>
<td>.46</td>
</tr>
<tr>
<td></td>
<td>(1.33)</td>
<td>(.41)</td>
<td>(2.84)</td>
<td>(2.62)</td>
<td>(1.43)</td>
<td>(1.86)</td>
<td>(2.10)</td>
<td>(.92)</td>
</tr>
<tr>
<td>% cc pop</td>
<td>-1.02</td>
<td>-.50</td>
<td>-3.49*</td>
<td>-.62</td>
<td>-.86</td>
<td>-2.21</td>
<td>-.12</td>
<td>-.34</td>
</tr>
<tr>
<td></td>
<td>(-.75)</td>
<td>(-.36)</td>
<td>(-2.24)</td>
<td>(-.67)</td>
<td>(.43)</td>
<td>(-1.83)</td>
<td>(-.12)</td>
<td>(-.39)</td>
</tr>
<tr>
<td>Con</td>
<td>-3.60**</td>
<td>-1.77</td>
<td>-1.46</td>
<td>-1.02</td>
<td>-1.45</td>
<td>-1.87</td>
<td>-1.36</td>
<td>.25</td>
</tr>
<tr>
<td></td>
<td>(-2.58)</td>
<td>(-1.80)</td>
<td>(-1.63)</td>
<td>(-1.48)</td>
<td>(-1.83)</td>
<td>(-1.08)</td>
<td>(-1.75)</td>
<td>(.36)</td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>.04</td>
<td>.01</td>
<td>.12</td>
<td>.02</td>
<td>.02</td>
<td>.05</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>N</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01, ***P < .001
ADM financial administration, GEN general control, WLF public welfare, LIB libraries, FIR fire, POL police, HLT health, ED education