

# **Does Governance Matter? The Dynamics of Metropolitan Governance and Competitiveness**

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## **Abstract**

Metropolitan areas are governed by a patchwork of governmental units that contribute to the dispersion of people and the diffusion of local power. These effects are visible in nearly every metropolitan region whether they are growing or shrinking. The policy debate has focused on questions of efficiency, rather than the developmental impacts of these choices. Analysis must be structured to capture the long-term effects of governance and to avoid falsely attributing short-term economic fluctuations to changes in governance. This research examines the competitiveness of 285 metropolitan areas over nearly thirty years from 1972 to 1997 with Ordinary Least Squares (OLS) regression. The analysis confirms that governance is a significant influence on metropolitan competitiveness, but the findings do not fully support the traditional arguments regarding governance.

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**Brief Bio**

Jerry has ten years of experience in regional development and public policy. He has held positions in private planning consulting firms, the Ben Franklin Technology Center of Western Pennsylvania (BFTC/WP) and is currently the Associate Director of the Center for Economic Development. As the Manager of Business Services at Ben Franklin, Jerry initiated several multi-organizational, collaborative efforts to provide business services throughout Southwestern Pennsylvania.

Jerry received a B.A. in International Affairs from Johns Hopkins University, a Masters of Urban and Regional Planning and a Ph.D. in Public Policy from the Graduate School of Public and International Affairs at the University of Pittsburgh. Jerry has conducted research on the relationship between governance and competitiveness, the economic impact of brownfields redevelopment, and the development of technology cluster strategies.

**Publications**

1. Opportunities for Growing the Information Technology Cluster in Pennsylvania, report for the Ben Franklin Partnership, January 1999.
2. Opportunities for Growing the Environmental Technology Cluster in Pennsylvania, report for the Ben Franklin Partnership, January 1999.
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6. Federal and Local Policy in the Development of Allegheny County, 1940 – 1990, working paper for the Pittsburgh Metropolitan Case Study, the Brookings Institute.
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8. Governance and Competitive Regions, May 2001.
9. Cross-Cluster Challenges: An Action Plan for Southwestern Pennsylvania
10. An Action Plan for the Information Technology Cluster in Southwestern Pennsylvania.
11. A Biotechnology Action Plan for in Southwestern Pennsylvania.
12. Plugging the Brain Drain: A Review of Studies and Issues for Attracting and Retaining Talent.

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## **The Policy Debates**

The patchwork of local authority that governs metropolitan areas in the United States has presented a catch-22 for local government. Citizens and local officials created new units of government to respond to the desire for localized services (Hughes and Smith 1991; Parks and Ostrom 1981; Ostrom and Parks 1973) or to remove expenditures from the budget (Sbragia 1996). The problem is that this proliferation of local government units disperses power and authority over a clutter of elected and appointed officials, decreasing the ability to make collective decisions (Lewis 1996). In the long run, dispersed governance structures inhibit the long-term competitiveness of a metropolitan area. The critical question is not the efficiency but the capacity of government. A market of efficient governments competing for residents may lack the capacity for development. Governments may be too small in either land area or fiscal resources to promote development activities or adapt to changing economic circumstances.

Following the lead of Tiebout (1956), most studies on the governance of metropolitan areas have focused primarily on the cost efficiency of providing public services. Most of the concern about the development impacts of governance has focused on the economic relationships between cities and suburbs (Voith 1998; Hill and Wolman 1997; Hill, Wolman and Ford 1995; Savitch et al 1993; Ledebur and Barnes 1992; Voith 1992). This substantial body of theoretical and empirical literature confirms the argument that metropolitan economies are interdependent and the success or failure of one unit is linked to its neighbors. However, the division of the metropolitan area into two distinct components (city and suburbs) obscures the very real differences between municipalities, and is a narrow analytical framework.

Outside of the city-suburb framework, there have been very few studies that explicitly examine how regional governance promotes or inhibits the capacity for development. In this capacity of government critique, fragmented structures have been found to contribute to a pattern of fiscal distress and municipal decline (Miller et al 1995; Morgan and Mareschal 1999). The structure of government in a metropolitan area can also influence the pattern of development, with fragmented regions producing more dispersed development (Lewis 1996), as well as more segregated communities (Weiher 1991; Morgan and Mareschal 1999).

Carr and Feiock (1999) tested the link between regional governance and development, by comparing economic growth between 1950 and 1993 in nine regions with consolidated city-county governments. Consolidations in the nine regions occurred between 1967 and 1984. They used a lagged dummy variable that phased in the consolidation effect over five years. Economic growth was measured alternately as the change in manufacturing establishments or the change in retail and service establishments. Carr and Feiock (1999) concluded that consolidation neither *positively nor negatively* influenced economic. Unfortunately, this study employed a consolidation variable that did not reflect differences in the level of integration for different consolidations, or the actual lag in implementing a city-county merger by an incremental dummy variable. A more sophisticated handling of the consolidation variable would have been a substantial undertaking for a large comparative study, but not a study with only nine jurisdictions.

Lewis's contribution was not limited to advancing the linkages between governance and development. His Political Fragmentation Index was a more sophisticated measure of

governance in metropolitan areas than the count of government units, or a ratio of government units to population or area. These measures failed to control for the variation in power, functions, and capacity, both across and within metropolitan areas and states (Lewis 1996, 48-49). The Political Fragmentation Index included only those governments that exercised land-use authority, because it was central to the kinds of development outcomes in which he was interested. In addition to general-purpose units, Lewis (1996) included special districts that influenced development patterns – transportation districts, housing and community development districts, and water and sewer districts. He excluded school districts, fire districts, and some other special districts. The measure was defined as:

$$\text{PFI} = \text{TE} * (1-\text{SSP})^1$$

Where:

PFI = Political Fragmentation Index

TE = total expenditures per capita by land use governments (\$1,000)

SSP = sum of squared percentage of TE accounted for by each local government

In addition to political fragmentation, Lewis incorporated variables for population, age, office employment, finance insurance and real estate (FIRE) employment, a dummy for state or national capitals, contiguity with other MSAs, and population growth. Lewis (1996) examined eighty metropolitan areas with data from 1980, and observed that political fragmentation resulted in decreased share of office space for the Central Business District (CBD), less centrality, greater commuting times, more edge cities, and more urban sprawl.

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<sup>1</sup> (1-SSP) is interpreted as the probability that the same unit of government did not spend two randomly selected dollars of expenditure. Multiplying (1-SSP)\*TE effectively weights the measure by the total capacity of local government, providing a rough approximation of differences in power and functional responsibility (Lewis 1996, 51).

As the debate has shifted from questions of efficiency to the problems of development, research has relied on simplistic measures of metropolitan governance and inadequate measures of economic performance that fail to account for national and industrial business cycles. The policy debate is currently lacking a comprehensive analysis of how regional governance constrains or encourages the regional economy. Lewis (1996) provided a broad cross-section, but he did not examine whether these relationships were stable over time and how regional or macroeconomic trends might have distorted the analysis. Carr and Feiock (1999) provided a long time trend, but they examined only a small number of cases. An analysis that combined a broad cross-section with a time trend would control for regional and macroeconomic effects that may have distorted previous analyses. Much of the analysis has relied on inadequate measures of fragmentation that ignored the role of special districts and failed to account for state-local relations. Furthermore, given the resources and data available today, there is no reason not to expand the time horizon and increase the sample size of the analysis.

In order to foster long-term growth and development, regions must focus on the factors that make them more competitive. How well a region organizes and utilizes its assets and resources is the key to its ability to compete (Hill and Brennan 2000). This approach requires us to look not at one factor, but a set of factors and how they are organized. Governments and local institutions provide a critical function in organizing resources to respond to economic change and establishing the boundaries for a region's economic prospects (Hudson 1994; Amin and Thrift 1995). The public sector can play an important role in fostering innovation and development (Rigopoulou 1998; Rigopoulou and Mitchell-Weaver 1996). Local government



also plays a critical role in guiding, encouraging, and discouraging development. Public provision of infrastructure is a critical element in development (Lewis 1996, 13; Haynes and Stough 1997, 82; Jackson 1985; Taylor, 1991, 60).

Changing social and institutional structures is not an easy task. Therefore, regions must be careful not to change government or institutional structures too quickly or radically in response to forecasts of economic doom. Unfortunately, that is happening now. Regionalism has rightly or wrongly been advocated as the cure-all for a variety of ills. In various places, regional solutions have been applied to problems of growth and decline, segregation and disparity, and traditional issues of governmental efficiency and effectiveness. Metropolitan solutions are untested in their application to development problems, but they are prevalent enough, and the issues and policy problems are important enough, that they warrant attention. On the other hand, arguments that decentralized regions are better suited to conditions of economic change are likewise untested. From a policy perspective, it is important to know whether metropolitan governance has an effect on economic performance, and if it does, whether centralized or decentralized systems offer greater benefits.

## **Methodology**

Reform of metropolitan government is not likely to affect the short-term growth prospects of a region. In the long run, however, the ability of a region to adapt to these changes is critical to its competitiveness. Local and regional governments play a critical role in our ability to manage this process of change and prepare for new economic realities. The role that government plays in the economy – providing infrastructure, services, and education – will

determine the patterns of land use, the preservation of amenities, and the quality of the workforce. Local government cannot halt an industry-wide decline, but it can create the capacity for adapting to new economic conditions. In short, local government affects the ability of a region to compete. The question is how to organize government to improve the ability of a region to compete in an environment of external challenges and internal economic transformations. Centralized regions might be better equipped to coordinate policy and marshal resources toward common goals. Conversely, decentralized regions might permit more experimentation by enabling a variety of responses that could offer a greater aggregate probability of success.

## **Variables**

The dependent variable is a measure of metropolitan competitiveness derived from a dynamic shift-share technique (Barff and Knight 1988). Shift-share analysis provides a way to simplify the problem of isolating the influences on the performance of a metropolitan economy. The shift-share technique assumes that change in employment is explained by national trends, industry mix, and a residual that represents the competitive strength of the regional economy – the metropolitan shift. The shift-share was conducted for each year from 1972 to 1997 for all 285 MSAs in the dataset. The shift-share was calculated with two-digit-level income data from the Regional Economic Information System. The annual shift-share measure for each MSA was normalized by the total metropolitan employment in the base year. Subsequently, the annual competitiveness measures were summed for 1972 to 1997, resulting in the long-term metropolitan competitiveness measure (LSE7397).

Shift-share analysis received a great deal of attention as a methodology for analyzing and forecasting regional economies. Some scholars (Richardson 1978; Stevens and Moore 1980) criticized shift-share because it does not relate changes in the regional economy to the factors identified in regional growth theory, such as demand and supply. Another line of criticism focused on how shift-share accounted for industrial structure, (Thirlwall 1967; Loveridge 1994; Hoppes 1994) and its utility (or lack thereof) in forecasting (Buck 1970; Hellman 1976; Stevens and Moore 1980; Nissan and Carter 1994).

Much of this criticism is justified, but shift-share remains a valuable technique to decompose changes in a regional economy, and that is the proposed use in this analysis – no effort at prediction or forecasting is attempted. Shift-share continues to be a popular technique because it is extremely flexible and adaptable to a variety of data and forms of analysis. The technique is conceptually simple and communicates regional change in terms that are both powerful and easy to communicate. For these reasons, shift-share continues to be applied to new analytical questions (Gazel and Schwer 1998; Markusen, Nojonen and Driessen 1991; Nojonen and Markusen 1997).

Regional governance has been measured in a variety of ways, not including qualitative assessments common to case studies (see Appendix 2). Unfortunately, very few of these methods provide valid and reliable methods for comparing the governance of metropolitan areas. The Metropolitan Power Diffusion Index (MPDI) resolved many of the problems related to measuring the political effects of fragmentation (Miller 2000; Mitchell-Weaver, Miller and Deal 2000). Based on 24 categories of government expenditures, the MPDI provides a proxy

for the expression of power by units of government. However, it does so without obscuring the small players. This index was similar to the Political Fragmentation Index developed by Lewis (1996).

These measures provided a better means of controlling for the variations in power and functions across metropolitan areas than measures that relied on the absolute or relative measure of governments. The MPDI calculated the sum of the square root of each municipality's percentage of metropolitan expenditures, while Lewis used the sum of the square percentage. The difference was that the MPDI exaggerated the influence of the smaller players, while Lewis diminished the contribution of small governments to metropolitan fragmentation. The MPDI was better suited to capturing the ability of even small players to block progress, change, and metropolitan action. Data from the Census of Governments were used to calculate the MPDI for 311 MSAs in 1972 using the 1992 MSA definitions in all calculations. Using the 1972 MPDI variable captures the initial conditions of metropolitan fragmentation, and enables an analysis of how much influence fragmentation has on long-term competitiveness. Because fragmentation changes very slowly, and because this index is stable over time, it should not adversely impact the analysis to rely on the 1972 measure.

The MPDI provides a rough estimate of local powers and responsibilities, but it does not explicitly consider the delegation of power between states, counties, and municipalities. As a result, the measure does not fully reflect state mandates or the distribution of state-local power that might increase local expenditures or state intergovernmental aid. Stephens's (1997) index of state centralization (SCI), calculated for 1957 and 1995, provides a measure of state power.

The SCI incorporated three components: the services delivered by the state, the financial responsibility of the state for public services delivered by other levels of government, and state government personnel. These three components capture three important dimensions of the state government. Smaller states tend to have higher levels of centralization, but the SCI does not function as a proxy for the size of the state.<sup>1</sup>

The expectation is that fragmentation is less significant with more centralized states. This interaction may not be fully captured by including the index of state centralization alone.

Therefore, the model also includes a term to capture the interaction of state centralization and metropolitan fragmentation (MPDI\*SCI). Fragmentation may not be as critical in a centralized state, whereas a unified metropolis in a centralized state may have conflicts with the state government. I used the SCI from 1957 in the interaction term to reflect the centralization and fragmentation at the beginning of the period of interest. The 1995 SCI is used to reflect the current level of centralization. Overall, states are centralizing (Stephens and Wikstrom 2000) and metropolitan areas are decentralizing (Mitchell-Weaver, Miller and Deal, 2000), so these initial conditions establish the important differences between metropolitan areas as metropolitan and state governments converge.

Metropolitan areas that function as state capitals can be expected to have a different economic dynamic than other metropolitan areas that do not have a concentration of government employment. State capitals possess an inherent advantage in competing for business locations and will have certain functions not available to other locales. Lewis (1996) used a state capital dummy variable in his analysis of metropolitan development. The dummy

variable, CAP, is represented by a one if the MSA includes a state capital, and a zero if it does not.

A control variable for the initial size of the metropolitan area (POP) is also added to control for the effects of agglomeration economies. Too much agglomeration, in the form of congestion or high costs, can reduce economic competitiveness and performance. Nonetheless, it is expected that agglomeration has a positive effect on economic performance and competitiveness. Larger metropolitan areas are able to support more economic diversity that helps to maintain growth and provides a source of new innovations. Certain very large MSAs, such as New York, Chicago and Los Angeles, however, may be so large that the positive effects of their agglomeration economies outweigh the negative effects. At a minimum, different dynamics of competitiveness may operate for very large metropolitan areas compared to small and mid-sized ones.

## **Patterns of Competitiveness**

Overall, metropolitan competitiveness improved significantly between 1972-1977, compared to the period 1970-1972 (Table 1). The period from 1977-1982 represents the worst period for metropolitan competitiveness, reflecting both the restructuring of the economy and shifts away from major urban areas. The standard deviation represents the spread in the competitiveness score, and with the minimum and maximum scores indicate the gap between strong and weak performing metropolitan areas. Drastic declines in 1982-1987 slightly reduced the gap between the best and worst, but only because of widespread decline in competitiveness

for metropolitan regions. Conditions have improved since 1987, although between 1992 and 1997 there has been a considerable increase in the gap between the best and worst. The shift of manufacturing out of the Northeast and Midwest, combined with the transition to service industries, is most likely responsible for this pattern. Some metropolitan area benefited tremendously from these shifts, while others were devastated.

**Table 1 about here**

Examining regional patterns of competitiveness demonstrates how diverse regional stories are assimilated into the national picture. Overall competitiveness improved between 1972-1977, masking the severe decline in the Northeast. The decline from 1977-1982, which was also reflected in national per capita income, was really the story of the Northeast-Midwest restructuring, because the other regions demonstrated competitiveness, albeit at depressed levels. The Northeast recovered between 1982-1987, following (or leading) the national trend. However, hard times continued in the Midwest, and were most severe in the Plains states.

**Table 2 about here**

These trends reflect the industrial and regional restructuring that has occurred in the United States. This restructuring devastated some regions, especially the industrial Midwest (Bluestone and Harrison 1982), while other areas actually benefited from it (Krugman 1996). The Northeast suffered again between 1987-1997, while the Midwest and Plains regions began their recovery after 1992. The South has demonstrated the most stable competitive performance. The Pacific region, which is home to some of the most competitive metropolitan

areas, has demonstrated more boom and bust. Furthermore, after 1992 the competitiveness of the Pacific region has declined. An interesting question is whether this decline is a temporary blip, or a signal of fundamental problems in the competitiveness of metropolitan areas in the Pacific region. For the purposes of analysis, these regional patterns underscore the need for longer time frames and larger samples.

## **Patterns of Governance**

The trend for metropolitan governance can be summarized as decentralizing. The MPDI measures the decentralization of expenditures within metropolitan areas. Local governments have long used the creation of new units of government, especially special districts and authorities, to evade the debt limits placed on them by state governments and to increase their capacity to borrow from the capital markets (Sbragia 1996). For the 285 MSAs in the dataset, the index has increased from 3.78 to 4.11 between 1972 and 1992, for a total increase of 8.5 percent. The steady increase in the decentralization is in contrast with the volatility in competitiveness.

Regional patterns of fragmentation are also fairly consistent (Table 3). The Northeast has been the most fragmented region, followed by the Midwest, Pacific, Plains, South and finally the Mountains. Fragmentation has also increased consistently in every region from 1972 to 1992. In the Northeast, fragmentation decreased slightly from 1987 to 1992, but it still increased by nearly 9 percent over the 1972 level. In the Pacific region, metropolitan fragmentation reached its peak in 1982, but the 1992 level is still higher than in 1972. The



largest percentage increases in fragmentation occurred in the least fragmented regions.

Fragmentation in the Mountain region increased by 16.4 percent; nearly double the increase for all metropolitan areas. Fragmentation in the Plains region increased by 13.1 percent, also well above the national rate.

**Table 3 about here**

On the whole, decentralization has increased by only 8.5 percent from 1972 to 1992, but changes in that average obscure the significant decentralization in many metropolitan areas. Most areas are experiencing significant decentralization of regional governance. The biggest factor increasing the MPDI is the addition of new units of government, although increasing levels of expenditures among small units also increases the fragmentation score. The troubling issue with this increase in decentralization is that it occurs as a response by municipal governments to the pressures to promote development. The creation of special districts and authorities in particular enables local governments to borrow on the capital markets to finance development (Sbragia 1996). Decentralization occurs without much regard for the impact on the future of the metropolitan area. In fact, there is some evidence (Sbragia 1996) that this decentralization is encouraged as a way to promote development. The problem is that we really do not know what impact decentralization has on competitiveness. The creation of new units of governments and the dispersion of authority that has occurred in metropolitan areas creates additional challenges for maintaining the competitiveness of the metropolitan economy. A statistical analysis of the impact of metropolitan governance on metropolitan competitiveness will explain the impact that governance has on development and competitiveness.

## Analysis

Metropolitan areas were dropped from the dataset when there were discrepancies in the FIPS codes or population data between the sources. Matching the MPDI data with the LSE data resulted in a final sample of 285 metropolitan areas. For the sample of 285 metropolitan areas, these variables have the following distribution (Table 4):

### Table 4 about here

The general model analyzing the impact of regional governance on metropolitan competitiveness is specified below. The data was analyzed using Ordinary Least Squares (OLS) regression with all 285 MSAs in the dataset. Metropolitan competitiveness was analyzed from 1973 to 1997 to examine the long-term impact of governance on competitiveness. This long-term perspective provides some insurance that the observed competitiveness is not an outlier in the region's performance. Competitiveness is measured beginning in 1973, because the measure for governance precedes it. The MPDI measure is taken from 1972, to demonstrate how initial conditions in the MPDI impact future competitiveness.

$$LSE7397 = F(LMPDI72, LGSCI95, MPDI*SCI57, LGPOP72, CAP)$$

Where:

LSE7397 = Metropolitan competitiveness, 1973-1997

LMPDI72 = Log of 1972 Metropolitan Fragmentation Index

LFSCI95 = Log of Stephen's State Centralization Index, 1995

MPDI\*SCI57 = Interaction of 1972 MPDI and 1957 State Centralization Index

LGPOP72 = Log of metropolitan population, 1972

CAP = Dummy variable for state capital

This model will enable a test of whether regional governance influences long-term metropolitan competitiveness. The expectation is that fragmentation reduces the long-run competitiveness of metropolitan areas. Metropolitan fragmentation may be less significant in centralized states. Furthermore, interaction between the fragmentation of metropolitan government and centralization may also influence competitiveness. Unified metropolitan areas may conflict with a centralized state government. Metropolitan areas that serve as state capitals may also possess different advantages and disadvantages that affect competitiveness. Finally, the initial size of the metropolitan area may provide positive effects through agglomeration economies, or negative effects in the form of congestion or high costs. Furthermore, there may be different dynamics of competitiveness that operate for metropolitan areas of different sizes.

**Table 5 about here**

$$LSE7397 = -3.26(LMF72) - 0.56 (LGSCI95) + 3.09(MPDI*SCI57) + 0.12(CAP)$$

Performing an OLS regression on the general model explains 27.3 percent of the variance in metropolitan competitiveness. Controlling for national trends and industrial composition, metropolitan competitiveness is adversely affected by metropolitan fragmentation, which exerts a strong and negative influence on metropolitan competitiveness (-3.26). The relationship is significant at the one-percent level, supporting the conclusion that decentralizing regional governance has a negative effect on metropolitan competitiveness. State centralization also exerts a negative influence (-0.56), but the effect is much smaller than the regional

fragmentation effect. The next largest influence on competitiveness is the interaction between regional and state governance (MPDI\*SCI57), which exerts almost as strong a positive influence (3.09) as fragmentation exerts a negative influence. The presence of a state capital also exerts a small positive influence on metropolitan competitiveness (0.12) that was significant at the five-percent level. The population size did not exert any significant influence on metropolitan competitiveness.

**Table 6 about here**

Metropolitan fragmentation exerts a statistically significant negative impact on competitiveness as expected. Contrary to initial expectations, state centralization also exerts a negative influence on competitiveness. The results indicate that there must be a balance of centralization and fragmentation between the state and local levels. The negative impacts of a fragmented metropolis are not relieved by a centralized state. Furthermore, unified metropolitan areas (as indicated by a low MPDI) will also perform best in a decentralized state, perhaps indicating that unified metropolitan areas conflict with centralized state governments. Strong and unified metropolitan governments may rival the state in terms of power and prestige, creating political conflicts over issues and priorities. These findings are summarized in Table 6.

In order to clarify the interactions between metropolitan governance and state centralization, a set of predicted competitiveness values was produced from the regression analysis. These predicted values were saved and added to the dataset. Each MSA was classified according to whether the metropolitan area was fragmented or unified (MPDI), and

whether the home state was centralized or decentralized (SCI). For each of these areas, the average, minimum, and maximum values were computed for the predicted competitiveness. Metropolitan areas in centralized states were estimated to have a level of competitiveness significantly lower than those in decentralized states (0.95), compared to (3.04). State centralization lowers the overall performance of metropolitan areas, with minimum values well below those for decentralized states.

Reducing metropolitan fragmentation is associated with significant increases in their average competitiveness for metropolitan areas. The competitiveness score for the average fragmented region was only (0.40), compared to (3.56) for unified regions. Reducing fragmentation may not benefit the most competitive MSAs, however, the top score for competitiveness actually declined from (11.82) for fragmented MSAs to (10.92) for unified MSAs. Reducing fragmentation benefits competitiveness for regions at the lower end of the scale. The lowest predicted score for competitiveness in the unified MSAs was (-4.51), compared to (-11.07) for fragmented MSAs. Reducing fragmentation would seem to be a strategy for boosting the performance of currently weak competitors, but the ultimate gains from less fragmented metropolitan governance are limited. Of course, we shouldn't expect less fragmented metropolitan governance to have limitless gains. In fact, the ideal of one government for the metropolitan area may be detrimental to performance. Since no metropolitan in the dataset achieves this level, it was not simulated.

These results indicate that metropolitan governance must be viewed in the broader context of state-local government relations. There are no simple solutions, such as strengthening

metropolitan-style governments, or transferring functions to state government. Local power and functions must be considered in concert with state power and functions, so that they are aligned in a way that makes sense and balances the needs for organization and coordination with the need for flexibility. Centralized state power tends to reduce competitiveness. Overall, metropolitan areas in centralized states were less competitive. Unified metropolitan areas in centralized states were also less competitive, as expected, because of the potential for conflict between regional and state interests (see page 15). However, the results also indicate that fragmented metropolitan areas in decentralized states do better than their counterparts in centralized states. Thus, while unified MSAs might conflict with centralized state governments, the benefits of reducing fragmentation are greater. In fact, the fragmented regions in decentralized states were approximately as competitive as unified metropolitan areas in centralized states.

Unexpectedly, the worst scenario is a fragmented MSA in a centralized state. This indicates that state centralization is not a strategy to remedy the inability to improve metropolitan structures. The ability to have flexibility at the metropolitan level provides greater benefit than centralization at the state level. Much the same as national economic policy has been criticized for treating regions as homogenous, it appears that state policy may also suffer from ignoring the distinctions between metropolitan areas.

### Metropolitan Size

One puzzling finding is that population size is not significant. The results from the model indicate a negative impact of population size on competitiveness, but it was not statistically significant. The population size variable was included to examine whether positive or negative agglomeration economies affected competitiveness. The answer seems to be no, but the model may not have been sufficiently refined to reveal more about how population dynamics separate from fragmentation might influence competitiveness. There is a general linear relationship between population size and fragmentation such that fragmentation increases with population. The interaction between population and fragmentation may have distorted the results of the analysis. Grouping metropolitan areas according to population size might better reveal these population dynamics by sorting out the effects of fragmentation from population.

**Table 7 about here**

The regressions explain 18 to 41 percent of the variation in competitiveness for different sized groups. The models provide the most explanatory power for the largest and smallest classes. For metropolitan areas between 500,000 and one-million persons, the model explains 41 percent of the variation in competitiveness. For the largest MSAs, with more than one-million persons, 31 percent of the variation is explained. The model explains less of the variation in competitiveness for the middle two classes; only 18 percent to 21 percent. These regressions indicate that a significant amount of the variation in competitiveness can be attributed to governance. Of course, there is still a significant portion of competitiveness that could be explained by firm practices, demographic characteristics, and other factors. The factors traditionally examined in development and growth theory – demand and supply factors – could

also explain some of the variation in competitiveness. Practitioners and academics alike have been very concerned with the quality of the workforce, regional amenities, and local innovation-generating assets such as universities.

### Fragmentation

The results of the regressions for these size classifications are consistent with the earlier analyses. For all size classes, state centralization and fragmentation are associated with reduced competitiveness. Fragmentation consistently exerts a larger negative influence than state centralization. The strongest association between fragmentation and reduced competitiveness occurs with the smallest and largest metropolitan areas. The impact on the smallest metropolitan areas is the most severe (-4.41), and the model explains 31 percent of the variance in competitiveness. Smaller areas with fragmented metropolitan governance may lack the scope and power to affect the challenges they face. The large negative impact of fragmentation indicates that unity could help to resolve the kinds of cross-jurisdictional challenges that are needed for a region to be competitive. These challenges include transportation and infrastructure, as well as workforce and social issues. Without a unified local front, small areas will be at the mercy of external forces.

### State Centralization

The coefficient for state centralization decreases with the size of the metropolitan area, and for the largest MSAs it is less statistically significant. State centralization is most strongly associated with reduced competitiveness for the smallest regions – those with fewer than



100,000 persons. If the largest MSAs are able to dominate state policy, it appears that the smallest ones suffer from centralized state rule. Nonetheless, the decentralization of metropolitan government (-4.41) still exerts a larger influence than state centralization (-0.84). Small MSAs have more to gain by unifying local governments at the metropolitan level than by decentralizing state control, but they have more to gain than large regions. Of course the gains from metropolitan unification will be mitigated by further state centralization. Powerful centralized state governments may ignore the needs and concerns of smaller metropolitan regions. These regions may find themselves unable to influence unfavorable policy decisions. Smaller MSAs may also be more dependent on state government for resources to maintain and improve their competitive position.

State centralization has the weakest influence on the largest MSAs. Larger regions might be expected to have some level of immunity, or to operate by a different dynamic that would insulate them from the factors of regional and state governance. In other words, the largest regions would have enough resources and momentum to write their own ticket. However, it appears that factors of regional and state governance remain important for these large areas. These large MSAs may be able to dominate state government and policy directly or indirectly. Stephens and Wikstrom (2000) argue that in small, centralized states the state government may operate as the de facto metropolitan government. The opposite is also likely. Very large metropolitan areas may dominate state government to the extent that any negative impacts from state centralization are minimized.

## Conclusion

The first key finding is that fragmented governance at the metropolitan level reduces the competitiveness of the metropolitan economy. The second key finding is that centralized state government also reduces metropolitan competitiveness. This research provides an important contribution as regional reform shifts from the question of governmental efficiency to how governance affects development. This analysis combines a broad cross-section with a time trend that controls for regional and macroeconomic effects that may have distorted previous analyses. Furthermore, the measure of local competitiveness accounts for national growth, industrial composition and productivity, while the measure of fragmentation accounts for differences in the scope and functions of local government rather than crudely dividing cities and suburbs.

While fragmented metropolitan governance inhibits the competitiveness of metropolitan areas, the state plays an important role as well. The centralization of state government has a negative influence on metropolitan competitiveness. This finding indicates the state does not function as a replacement for metropolitan governance. Prior to this analysis, state centralization or the transfer of "metropolitan" functions seemed like a potential solution for the inability of local governments to coordinate or cooperate. However, this analysis found that the worst-case scenario is a fragmented metropolitan area within a centralized state (Table 6, page 37).

The long-term competitiveness measure used in this analysis helps to smooth the effect of business cycles. The results do not dictate that fragmented regions cannot be strong competitors or enjoy periods of competitive excellence. Rather, the findings indicate that few

fragmented regions are likely to be strong competitors, and that they are unlikely to sustain competitiveness over the long-term. Long-term competitiveness requires flexibility, and fragmented regions are less likely to mobilize the consensus for change. Fragmented regions divide the regional constituency, offering opponents of change more opportunities, forums, and even institutional support to resist change. Unification encourages serving the regional constituency rather than parochial interests.

These results challenge some widely held assumptions, and present challenges for developing policy recommendations to improve the competitiveness of metropolitan areas. The interaction between state and local governance presents some of the greatest difficulty. Local, metropolitan, and state structures and policies must be considered in an integrated fashion. Developing isolated recommendations in either of these domains runs the risk of further exacerbating the challenges for metropolitan governance and development.

## **Policy Recommendations**

### **Local / Regional Actions**

Both metropolitan fragmentation and state centralization are associated with reducing metropolitan competitiveness. Therefore, at the metropolitan level, the goal is to unify leadership and development activity while maintaining flexibility in the governance structure, especially at the state level. Achieving these goals requires a careful balance, and suggests why the traditional prescriptions of both metropolitan reformers and public-choice advocates are not appropriate. The recommendations for any local area will have to be tailored to their unique

conditions. This includes considering the distribution of power and functions between state and local government, the quantity and capacity of local governments, and the region's reliance on special districts and the extent of their power and authority. While this research demonstrates the need to reduce fragmentation, there are several possible paths to accomplish that goal.

The addition of new units of government either to accommodate new population growth, shifting residential patterns, or to finance additional development expenditures, tends to increase fragmentation the most. This research indicates that the proliferation strategy is a trap for the long-term health of local governments. The catch-22 is that local governments have created new units of government, especially authorities and special districts, in order to evade the controls and debt limits placed on them by state governments (Sbragia 1996). Technically, the creation of new units keeps the debt off the books of the municipality. However, the credit-rating agencies often examine the total debt of local governments, related authorities, and special districts when they issue bond-quality ratings (Sbragia 1996). Even though this debt is not legally the obligation of the municipality, the ability to repay the debt is determined by the same tax base. While the addition of new units of government is often a strategy that local leaders believe is necessary, it is not sustainable. This analysis demonstrates that increasing fragmentation reduces long-term competitiveness. The creation of new units to support debt is analogous to an individual who gets new credit cards to finance additional expenditures. This individual is able to spend more, but is less likely to be able to repay the mounting debt.

### State Actions

The association between state centralization and reduced long-term competitiveness indicates that centralizing functions at the state level is not a good alternative to directly addressing metropolitan fragmentation. Changes at the local level that ignore state policy and functions (and vice versa) may aggravate the competitive weaknesses of a metropolitan area. This analysis explored state centralization as a unified index that did not distinguish what functions were centralized or decentralized. Thus, the recommendation to decentralize state government is burdened by the ambiguity regarding which functions may be best performed by state government. If regions are unable to improve metropolitan governance, state centralization of key functions and services might improve competitiveness, but only if we know the correct activities to centralize.

### Federal Actions

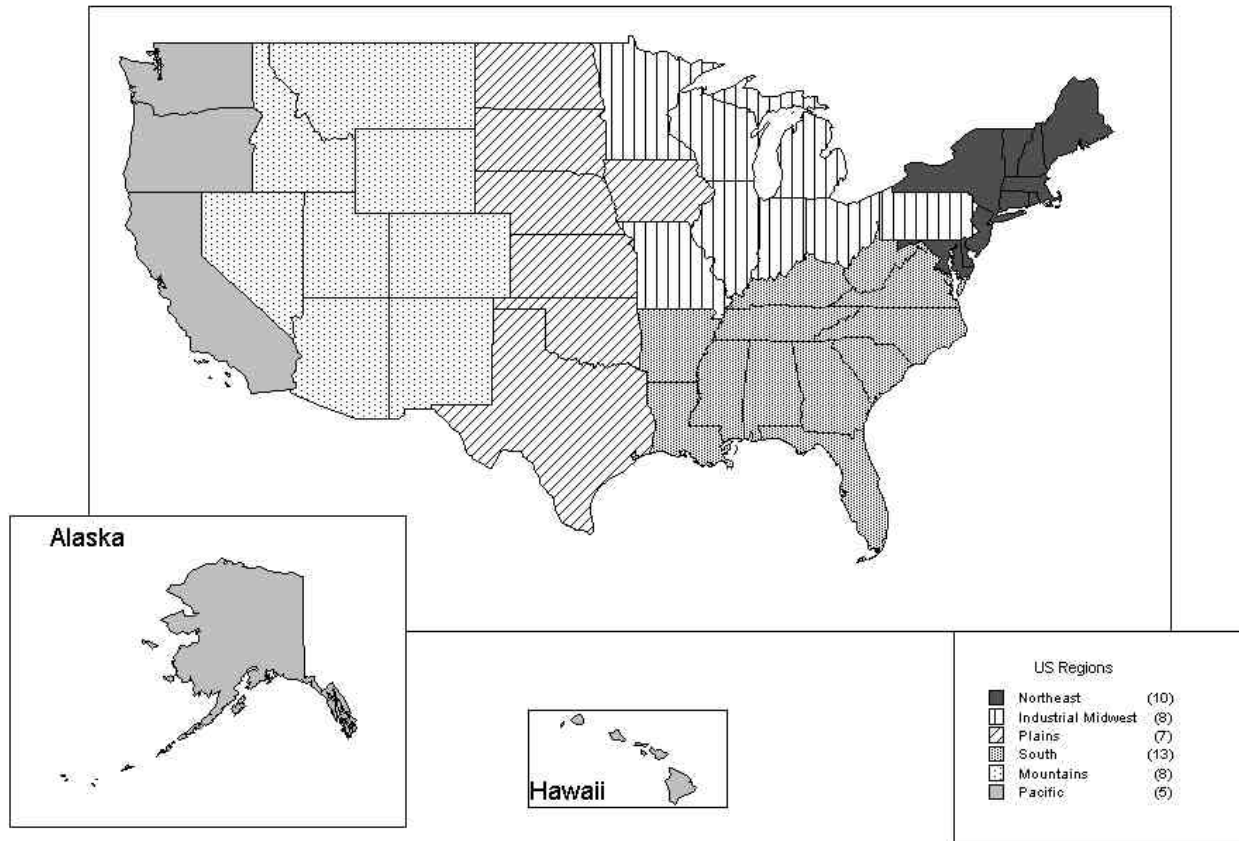
This analysis did not consider or integrate federal policy variables, which requires further analysis to account for the influence of federal policy. As a result, this analysis does not provide much direction on federal actions to reduce fragmentation or decentralize state government. The federal government has influenced state and local interactions through Metropolitan Planning Organizations (MPOs). The power and authority of MPOs has waxed and waned with different administrations and federal programs, but their role could be strengthened to reduce the effects of fragmented metropolitan governance. Any future analysis should consider how MPOs could help – either through their review or veto powers over federal funding, or through mechanisms to promote cooperation. The National Governor's Association (NGA) has recommended changes in the structure of our federal system to resolve overlap, duplication, and

coordination problems. "The current patchwork governance system that contributes to ad hoc, narrow-sighted decisions must be replaced with a new, broad vision of federalism" (Scheppach and Shafroth 2000, 21).

## **Future Directions**

Regional reforms have been advocated and developed with limited knowledge of the linkages between governance and development. Both metropolitan reformers and their opponents have proceeded as much on faith as on fact, without fully considering how regional government impacts development. Governmental structures are difficult to change. Remaking government as a response to a temporary economic boom or bust is a costly and inefficient strategy. Governance changes very slowly and is unlikely to influence short-term business cycles, but its policies and actions can establish the foundation for the long-run welfare and stability of the region. We need to address governance not as a response to an immediate crisis, but to foster long-term competitiveness. This long-term perspective requires an examination of metropolitan governance that addresses both local and state systems.

## Appendix 1: Map of US Regions



## Appendix 2

### *Measures of Government Fragmentation or Decentralization*

<i>Author</i>	<i>Fragmentation Measure</i>
Hawkins 1971	Governments per 100,000 persons
Hill 1974	1. Number of municipalities 2. Number of municipalities per capita
Goodman 1980	1. Number of general purpose units 2. Number of special purpose units
Zeigler and Brun 1980	Number per 100,000 persons
DiLorenzo 1983	Concentration of tax and expenditure in four largest jurisdictions in a county
Bollens 1986	1. Number of suburban units with more than 10,000 persons, per 100,000 persons in the MSA. 2. Percent of Metro residents in suburbs with more than 10,000 people
Schneider 1986	Municipalities per 100,000 people
Oakerson 1987	Total number of governments per 10,000
Dolan 1990	Fiscal dispersion – standard deviation of expenditure by governments within a county
Barlow 1991	1. Number of municipalities 2. Differences in population and area of municipalities 3. Scope of municipal responsibility 4. Sources of revenue (property tax dependence) 5. Prevalence of inter-municipal arrangements
Parks and Oakerson 1992	Governments per 10,000 persons
Lewis 1996	Herfindahl index of expenditures for land use governments
Morgan and Mareschal 1999	1. Cities > 10,000 persons per 1 million MSA population 2. Central-city population share 3. Central-city area growth 1970-1990
Carr and Feiock 1999	Incremental Dummy variable that phases in the consolidation effect over five years (start at 0 = not consolidated, then increase 0.2 per year for five years, to 1=consolidated)
Post and Stein 2000	Total number of city governments per 10,000
Miller 2000	Reverse Herfindahl index of expenditures for all governments



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**Table 1: Competitiveness (LSE) from 1970-1997**

	Mean	Median	Std. Deviation	Minimum	Maximum
1970-1972	0.69	0.62	1.94	-12.79	5.49
1972-1977	1.92	1.82	2.89	-7.23	14.29
1977-1982	0.00	-0.12	3.16	-10.13	17.83
1982-1987	-0.98	-0.61	3.86	-17.16	6.94
1987-1992	0.29	0.31	2.71	-10.23	9.91
1992-1997	0.85	0.72	3.37	-12.45	35.24

Source: calculated by the author

**Table 2: Competitiveness (Median LSE) by Region, 1970-1997**

	Northeast	Midwest	Plains	South	Mountain	Pacific
1970-1972	0.06	0.07	0.96	1.37	2.72	0.06
1972-1977	-2.26	0.61	3.86	2.08	3.96	3.58
1977-1982	-1.46	-2.18	0.34	0.92	1.49	0.79
1982-1987	1.55	-1.25	-2.89	0.61	-0.75	0.28
1987-1992	-1.41	-0.06	-0.35	0.64	0.96	2.28
1992-1997	-1.37	0.30	0.80	1.18	3.29	-0.52

Source: calculated by the author

**Table 3: Fragmentation by Region, 1972-1992**

Region	1972	1977	1982	1987	1992
Midwest	4.75	4.96	5.00	5.09	5.11
Mountains	2.60	2.80	2.87	2.89	3.03
Northeast	5.44	5.43	5.75	5.95	5.93
Pacific	3.81	3.90	4.19	4.13	4.07
Plains	3.04	3.31	3.44	3.37	3.44
South	3.01	3.09	3.18	3.21	3.19
<b>Total</b>	3.78	3.93	4.06	4.09	4.11

Source: calculated by the author

**Table 4: Descriptive Statistics for Sample**

	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Std. Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
<b>LSE7397</b>	285	1.98	1.88	7.90	-16.34	28.12
<b>LMPDI72</b>	285	0.54	0.52	0.19	0.14	1.16
<b>LGSCI95</b>	285	5.43	5.33	0.45	4.69	6.96
<b>MPDI*SCI57</b>	285	1.73	1.73	0.04	1.65	1.85
<b>LGPOP72</b>	285	0.86	0.86	0.29	0.24	1.92
<b>CAP</b>	285	0.13	0.00	0.34	0.00	1.00

Source: calculated by the author

Table 5: Regression Results

	Model 1			Model 2		
	Standardized Coefficients			Standardized Coefficients		
	Beta	t	Sig.	Beta	t	Sig.
<b>(Constant)</b>		8.121	0.000		8.746	0.000
<b>LGSCI95</b>	-0.564**	-8.382	0.000	-0.555**	-8.443	0.000
<b>LMPDI72</b>	-3.258**	-8.250	0.000	-3.263**	-8.273	0.000
<b>MPDI*SCI57</b>	3.117**	7.749	0.000	3.092**	7.730	0.000
<b>CAP</b>	0.127*	2.436	0.015	0.121*	2.367	0.026
<b>LGPOP72</b>	-0.045	-0.645	0.519			
<b>Dependent Variable: LSE7397</b>						
<b>Durbin-Watson</b>			2.02			2.02
<b>Adj. R<sup>2</sup></b>	0.271		0.000 (22.16)	0.273		0.000 (27.65)

\*\* Significant at the 0.01 level

\* Significant at the 0.05 level

n = 285

Source: calculated by the author



**Table 6: Impact of State-Local Interaction on Predicted Competitiveness**

		State		
		<i>Centralized</i> <i>SCI 1995 &gt;= 53.4</i>	<i>Decentralized</i> <i>SCI 1995 &lt; 53.4</i>	
<b>Metropolis</b>	<i>Fragmented</i> <i>MPDI 72 &gt;=</i> <i>3.38</i>	N = 74 Average = (-0.30) Minimum = (-11.08) Maximum = (11.82)	N = 69 Average = (1.16) Minimum = (-5.82) Maximum = (8.38)	N = 143 Average = (0.40) Minimum = (-11.08) Maximum = (11.82)
	<i>Unified</i> <i>MPDI 72 &lt;</i> <i>3.38</i>	N = 71 Average = (2.25) Minimum = (-4.51) Maximum = (8.88)	N = 71 Average = (4.86) Minimum = (-2.05) Maximum = (10.92)	N = 142 Average = (3.57) Minimum = (-4.51) Maximum = (10.92)
		N = 145 Average = (0.95) Minimum = (-11.08) Maximum = (11.82)	N = 140 Average = (3.04) Minimum = (-5.82) Maximum = (10.92)	

*Note: Competitiveness values predicted values from regression models.*

Source: calculated by the author

**Table 7: Summary Regression Results by Population Size Class**

	N	Standardized Coefficients				Adjusted R <sup>2</sup>
		LMPDI72	MPDI*SCI57	LGSCI95	CAPITAL	
<b>Under 100,000</b>	44	-4.406***	4.254***	-0.840***	0.238*	0.305***
<b>100,000 – 250,000</b>	108	-2.636***	2.638***	-0.605***	-0.005	0.180***
<b>250,000 – 500,000</b>	62	-2.248***	1.971**	-0.499***	0.076	0.210***
<b>500,000 – 1,000,000</b>	34	-1.923***	2.062***	-0.682***	0.130	0.410***
<b>Over 1,000,000</b>	37	-2.716***	2.582***	-0.459**	0.189	0.310***

\*\*\* significant at the 0.01 level,

\*\* significant at the 0.05 level,

\* significant at the 0.10 level.

Source: calculated by the author

End Notes

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<sup>1</sup> The 1957 SCI has a significant correlation with 1950 population of (-.586). The correlation declines to (-.495) between the 1995 SCI and 1995 population.