SERVICE PROVISION IN THE UNITED STATES: GOVERNMENT STRUCTURE AND EXPENDITURE, A STUDY OF SINGLE COUNTY METROPOLITAN AREAS

by

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Metropolitan and urban issues have been of interest to social scientists, policy analysts, and others for some time. This dissertation explores service provision related to government structure, and measurements of these relationships in metropolitan areas, because public service is a primary function of government. To account for different services in different areas, service expenditure and growth in service expenditure are used as the primary variables. Relationships between growth in expenditures and economic-demographic conditions are examined for county government structure.

The research method uses single county metropolitan areas to eliminate complications of large, multiple county metropolitan areas, such as multiple states. The study combines content analysis of government and academic documentation on local governance structure and characteristics with quantitative analysis.

There are several study findings regarding growth in service expenditure related to government structure and demographic condition. First, structures of government that facilitate managerial competency tend to have lower cost of service provision. Second, expenditure reduction is related to service scope and the type of government providing the service: 1) use of municipal service delivery for jurisdictional-specific services is associated with lower overall service expenditure for the metropolitan area; while 2) use of county services is associated with lower service expenditure for services which benefit from economies of scale; and 3) utilization of special districts is increasing and apparently benefits the tax stream and development finances. Third, in general metropolitan areas with more population in central cities have lower overall service expenditure growth.

This dissertation advances the current discussion for improvement of service provision in the following ways. First, it contributes to an understanding of metropolitan area conditions through

public service structure and governmental structure. Second, it contributes to the development of a methodological approach for measurement of metropolitan governance. This is accomplished with the concept of "share of service responsibility" for each type of local government and managerial competency. Third, it provides a benchmark of the service structure for multiple-county metropolitan areas.

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PREFACE

This dissertation is prepared with many thanks to committee members, Drs. Miller, Foster, Dougherty, and Paytas.

There have been several major societal transformations during my early working life in the United States. The collapse of the manufacturing sector in the 1980s happened when I had an occupation for a multi-international heavy industrial corporation in Pittsburgh, and the financial sector mergers occurred when I was employed in this sector. The information revolution hit full stride during the 1990s, during my career as a Librarian. My Library and Information Science degree from the University of Pittsburgh and subsequent work taught me much regarding information search and sharing, but even more, organization, subject analysis, and systemic thinking.

Dr. Mandelker from The Katz School of Business at the University introduced the concept of a "random walk," and the psychological effect on capital markets. Dr. Druzdzel from Information Science taught the cognitive side of human decision making and how to formulate heuristic objectivity. I thank Dr. Dunn of the Graduate School of Public and International Affairs for his ability to make policy understandable, and for his depth of knowledge and elegant writing.

I am greatly indebted to my family. My father taught his children concern for those less fortunate, and his academic encouragement has given me strength even as an adult. I thank my husband, Gordon for his endless support, and our two boys, Kevin and Ryan, who gave up some of their mother's playtime.

1.0 INTRODUCTION

Public service is a primary responsibility of governments. This dissertation is an exploratory study of service provision in the United States, using single metropolitan county statistical areas in order to facilitate an understanding of the metropolitan condition. Public discourse and the democratic process of voting enable citizens to inform governments of the services they need, allowing the use of service expenditures to be used as a proxy for all the various types of services provided. The metropolitan condition includes the demographic and economic environment as well as government structure.

This study conducts a two stage analysis. The first stage explores public service expenditure with influencing factors to the expenditure. The influencing factors chosen for the study are demography, government fragmentation, fiscal capacity, and proportional share of local governments' service responsibility for 1970 and 2000. The second stage examines the relationship between growth in service expenditure and economic-demographic conditions during these periods for two areas. One is for reformed and unreformed metropolitan counties. The other area is the relationship between growth in service expenditure and economic-demographic conditions by service contribution from each local government type, which is expressed as local governments' proportional share of service responsibility.

1.1 BACKGROUND

During recent decades, metropolitan areas have changed rapidly. Less expensive transportation has enabled residents to move further from the traditional central city core, stratifying the citizens into economic and demographic groups. At the same time, cheaper transportation enables industry to take advantage of lower labor costs in rural areas or developing nations, devastating the low-skilled labor force in the central cities and moving the general U.S. economy to become oriented to the service sector rather than manufacturing or agriculture. These changes are felt more at the local level, as governments and other organizations adapt policies, programs, and even their formal structure to accommodate these transformations in society. Of primary relevance to understand the experience of modern life in the United States is to examine the local government structure, as so many characteristics of the localities are reflected in or determined by the local governments.

In the U.S., there are three primary types of local governments, the county, municipality, and special district. Special districts usually have an oversight board, but for municipalities and counties there are three primary forms of local government; the council-manager, council-elected executive (or council-mayor), and commission (Foster, 1997b; Marando and Thomas, 1977; DeSantis and Renner, 2002). The three types of local government provide many of the same service functions, although for geographically different areas, either area-wide or in jurisdictional specific areas (Census of Governments, 2002). By the year 2002, the total number of local governments reached 57,515, mostly due to an increase in special districts. In the 1980s to the year 2002, the largest increase in public expenditures was from special districts, and the

smallest increase was for municipalities (Schneider and Park, 1989; Benton and Menzel, 1993; Park, 1996; Census of Governments, 2002). The increasing role of special districts in service provision contributes to further fragmentation of governmental units (Frug, 2002; Stephens and Wikstrom, 2000; Foster, 1997b; Miller 2002). Table 1-1 compares the numbers for the types of governments.

[Table 1-1]: Number and Percentage Change of County, Municipality, and Special District, 1962-2002

Local Governments	1962	2002	% Change, 1962-2002
Counties	3,043	3,034	-0.3
Municipalities	17,997	19,429	8.0
Special Districts	18,323	35,052	91.3
Total	39,363	57,515	46.1

Source: Government Organization, vol. 1, no. 1, 2002.

The largest type of local government, both geographically and by population, is the county. It is reasonable to expect the county leadership to set the vision and character of the smaller governments within their boundaries. According to the Municipal Year Book (2003), the commission is the most common form of county government.

[Table 1-2]: Forms of County Government by Percentage in the United States, 2002

Council-manager	Council-elected Executive	Commission
12.2	15.7	72.1

Source: The Municipal Year Book, 2003 with author's calculation.

Because of increasing complexity from changes in demographic and economic conditions**,** as well as the dichotomy between central city and suburbs, there has been great interest in area-

wide service provision for efficiency as well as for equity concern. In recent decades, there have been many studies on local public service provision (Liebert, 1974; Ammons and King, 1983; Benton, 1992; Benton and Menzel, 1993; Benton, 2002; Cigler, 1996; Cigler, 2002). Some issues and suggestions have been addressed in literature (Bollens and Schmandt, 1970; Orfield, 1997; Downs**,** 1994; Savitch and Vogel, 1996; Rusk, 2003; Dodge, 1990; Miller, 2002), but there are few studies to address and understand appropriate provision of public services in United States metropolitan areas. Because most metropolitan areas are comprised of several counties, with a myriad of smaller governments and agencies providing public services, this ambiguous quality makes studies of service provision particularly difficult. Governance decisions for the area are made in a de facto manner by the actions of the many governments and agencies that comprise them, and contrary to original expectations, counties cannot always provide vision for their area.

There are many studies on the relationship of governmental structure to service expenditure (Lineberry and Fowler, 1967; Schneider and Park, 1989; Duncombe, Duncombe, and Kinney, 1992; DeSantis and Renner, 1996; Park, 1996; Morgan and Kickham, 1999; Benton, 2002), which ask questions regarding expenditure or growth of expenditure, for example, "Does government structure matter?" Most of these studies are focused on particular research areas, rather than a broad contextual interpretation of local conditions and service provision. This dissertation follows the existing line of questioning, and attempts to provide quantitative analysis for theories affecting local and metropolitan service provision for a better understanding of the relationship between growth in expenditure and economic-demographic conditions. The diagram below shows the general expenditures (service provision) and influencing factors.

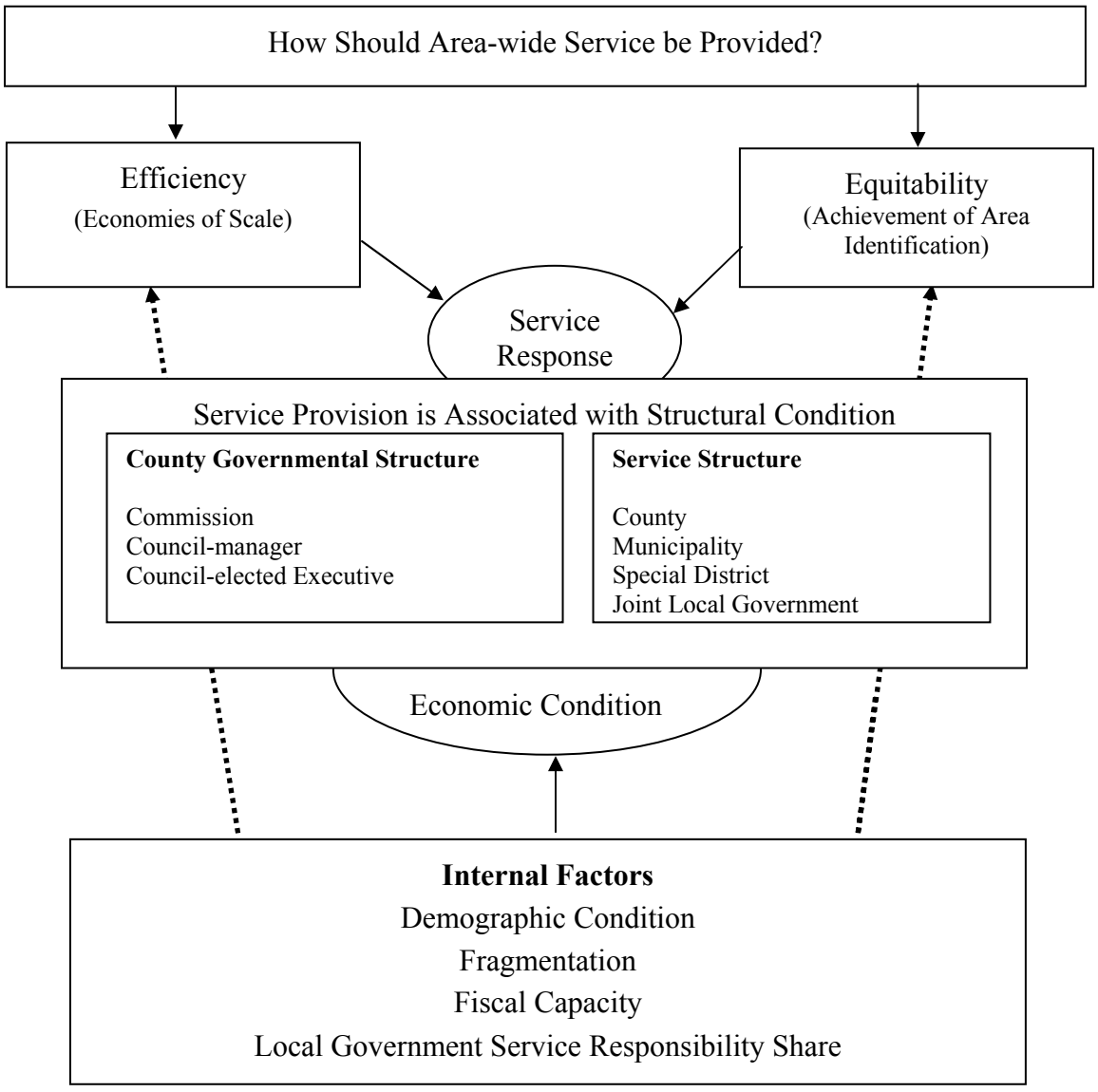

Figure 1-1: Service Provision, Response, and Factors

1.2 SERVICE PROVISION AND LOCAL GOVERNMENT STRUCTURE

Fundamental economic theory suggests that because basic resources to produce public goods are scarce and limited, society has to utilize its resources in the most efficient manner possible to satisfy human needs (Parkin, 1996). Lower growth in expenditure is used in the study to generally indicate the effects of good performance because the more managerial competency of public service, the more cost control is realized.

A comprehensive definition of effective governance stems from objective decision-making which is focused on administrative process such as efficiency (Wilson, 1887). Effectiveness could be determined by service quality, but it is difficult to measure in aggregate, and difficult to measure consistently across governments and government levels. This research assumes that over time, citizens will receive the services and quality that they demand through the democratic mechanisms of public discourse and elections, which makes service quality a less important measure of effectiveness. This means that Wilson's admonition to focus on efficiency of administrative process is the only necessary measure of effectiveness. Since citizens demand the services they need, those governments that provide those services for the least expenditure growth generally manage their service responsibilities more effectively. This is true for government-provided or contracted out services, because the costs are all service costs in which each unit of activities in economic institution are associated with transaction cost economics of series of contractual relationship (Moe, 1984; Williamson, 1985). The more managerial competency, the less expenditure growth because of the competency of the service program managers, or of the contract negotiators.

Population growth and density are used to make allowances for spending growth, otherwise, stagnating low-expenditure areas will be seen more favorably than dynamic areas that experience economic growth. It is expected that the council-manager form of government will exhibit the most effective management of cost control, because the managers are not elected, resulting in a more objective decision process and thus in rational spending.

1.3 CONTRIBUTION OF STUDY

This dissertation advances the current discussion for improvement of service provision in the following ways. First, it contributes to an understanding of metropolitan area condition through public service structure and governmental structure. Second, it contributes to the development of a methodological approach for measurement of metropolitan governance. This is accomplished with the concept of "share of service responsibility" for each type of local government, which is calculated using Miller's (2002) "Metropolitan Power Diffusion Index." Third, by using single-metropolitan county areas, it provides a benchmark of the service structure for multiple-county metropolitan areas.

1.4 ORGANIZATION OF STUDY

This study is organized in eight parts. Chapter 1 introduces studies of metropolitan service provision and factors influencing the service response. Chapter 2 and 3 are a general description of local governmental structure and their role. Chapter 2 describes types of local governments and the common forms of government structure. Chapter 3 describes the general service

responsibility of the types and forms of local governments. Chapter 4 introduces the internal budgetary and expenditure pressures of bureaucracies to provide perspective on government expenditure. Chapter 5 describes the governments and condition of the metropolitan county areas in the study with a perspective of the national regions of the United States. Methodology is discussed in Chapter 6 for exploration of service provision (expenditure) and the influencing factors to the expenditure. Chapter 7 is a study of the relationship between growth in service expenditure and economic-demographic conditions, for reformed and unreformed metropolitan counties, and for each type of local governments' proportional share of service responsibility. Chapter 8 discusses limitations of this study and future study areas.

2.0 LOCAL GOVERNMENTS AND GOVERNMENTAL STRUCTURE

Local governments are generally categorized as general purpose or special purpose. Counties and municipalities, including cities and towns, are general purpose governments (Government Organization, U.S. Census Bureau, 1997). Special districts, authorities, and school districts are usually categorized as special purpose governments, as they are separate from local governments and generally perform one or a very few service functions (Government Organization, U.S. Census Bureau, 1997; Burns, 1994). The difference between the special purpose governments is that authorities have the ability to levy taxes and usually have elected governing boards, while special districts are largely financed through user fees and have appointed oversight boards (Foster, 1997b). In this paper they are both in the category of special districts. School districts are independent, and service a single purpose; they are present and serve the same general purpose throughout the nation, but they are not included in this paper because they are not included as special district governments for census purposes (Government Organization, U.S. Census Bureau, 1997).

This chapter addresses the three primarily used general and special purpose local governments in their institutional structure and their role in local public governance or public service provision. The main reference sources are editorial work of Berman's "County Governments in an Era of Change" (1993), Duncombe's "County Government in America" (1966), editorial work of Menzel's "American County" (1996), Burns' "Formation of Local Governments" (1994), and Municipal Yearbook (various years).

2.1 COUNTY GOVERNMENT

County governments are the largest unit of local government, and derive from the subdivision of states that existed in colonial times, which was codified shortly after independence. They are rooted in the convenience to state government's exercise of power over large territories and to deliver traditional statewide services such as assessing and collecting taxes, and facilitating access to government services for less densely settled citizens (Salant, 1993; Cigler, 2002). Although historically counties are a "low-budget operation with a limited mission" (Salant, 1993: p. 107), the traditional role has been expanded to perform services similar to municipal governments (Marando, 1977). Currently many county governments provide service functions which have been the responsibility of municipal governments (Benton and Menzel, 1993; Government Finance, 2002). County governments also have a wide impact on local policies, and are the most territorially pervasive units of local government in the United States (Marando, 1977: p. 1; Marando and Thomas, 1977).

According to Marando (1977), there are three major influencing factors on county government. First, expanding socioeconomic and demographic complexity in urban areas compels more resources for growing service demand and more involvement at the county level for resolution of conflicts among competing interests. Second, as an administrative arm of the state, their state government is an important factor for what action may be taken by the county government. Third, the major federal influence in urban areas is direct federal funds to local governments for federal programs such as housing, construction of sewage treatment plants, and air and water pollution control. Not only do federal grants for programs influence political and administrative organizations, they also reduces local dependency on state aid, affecting state-local relations and

increasing fragmentation of local political power (p. 6-7). The next section examined structures of county government for an understanding of metropolitan conditions and governance issues in service provision.

2.1.1 Structure of County Government

Structure is defined in terms of dynamics of authority, leadership, and decision making (Menzel, 1996: p. 205). These characteristics are associated with the organizational forms of county government. There are three primary forms of county government; Commission, Council-manager (administrator), and Council-elected executive (Municipal Year Book, 1975 and 2003; Cigler, 2002).

1. Commission

The commission government is the traditional form of government at the county level. Originally this government was put forward by a reform movement that sought to bring accountability and business principles to government. The commissioners and the "row officers" are elected by direct citizen vote. Judges are also elected under this system. The row offices are heads of various service units, such as Register of Wills and Marriages, and are somewhat equivalent to the President's cabinet at the federal level. The commissioners serve as the legislators, and lead the administration (Miller, 2002). Leaders of the row offices administer their areas and officers consider themselves separate from the commissioners. The "balance of powers" is not as clear-cut as practiced at the federal level, but there seems to be more involvement and reliance on the electorate (Marando, 1977).

Disadvantages associated with the commission form stem from the absence of a chief administrator to provide more professionalism, executive leadership, and accountability (DeSantis, 2002: p. 128; Duncombe, 1966). DeSantis (2002) states that a major characteristic is that the smaller and more rural counties (with small population) are those that most frequently choose to remain under this form of government. Although optional forms of government are allowed in some states, many state constitutions such as Texas permit only the commission form of county government (Duncombe, 1966).

An urban commissioner may be more of a legislator than an administrator, where a rural commissioner may assume an active role in administering county functions (Marando, 1977: p. 16). The administrative and legislative combination both concentrates and diffuses power. It is concentrated because fewer people hold more power; but diffused because the lack of clearly defined roles or titles for the individuals creates a lack of transparency. This diffusion may also contribute to people's lack of awareness of county government. Counties with large population are more likely to modernize this traditional form to reformed governmental structure (MacManus, 1996: p. 54).

[Table 2-1]: Pros and Cons of Commission Form of County Government

Pros	Cons
1. Service units are more responsive to citizens because of the direct elections of the head of the units.	1. The absence of a strong executive creates a leadership vacuum. 2. Politicians as leaders of service units create less efficient and effective service, because the elected politicians do not necessarily have the professional expertise to manage their service unit. 3. The system is less accountable because power is diffused at the commission level. 4. The system seems to foster patronage.

2. Council-Manager or Council-Administrator

In this form of government, the voters elect a legislative body which serves as a policy-making body for the county, which hires an executive to carry out policies and oversee the executive departments (Duncombe, 1966). Duncombe (1966) states that ideally and most often in practice, the manager is a professional person selected on the basis of ability and experience rather than party affiliation (p. 11).

There are three subtypes of this form, relative to the amount of authority given to the administrator. In the "pure" version the administrator has broad power to hire and fire department heads. The second type has limited power, and in the weakest form the administrator

is an assistant to the legislature, performing tasks and providing advice but with little or no executive oversight.

According to DeSantis (2002), counties with a population above 50,000 tend to use this form of government more than areas with the population below 50,000.

[Table 2-2]: Pros and Cons of Council-Manager Form of County Government

Pros	Cons
1. More professional management. 2. Less tendency to partisan politics (Nalbandian, 1991: p. 11). 3. More transparent / less power diffusion, so more accountable.	1. Somewhat less electorally responsive than the commission form of government. 2. Lacking a visible leader position.

3. Council-elected Executive

This form of government is similar to the pure county manager (administrator) form, but with the executive being elected rather than appointed. The separation of powers arrangement is similar to the federal government (Marando and Thomas, 1977). A distinguishing characteristic is that a single official has a significant degree of supervision, control, or influence over most aspects of county administration (Duncombe, 1966). Most often the executive sets the budget, hires and fires department heads, and has other powers related to the strongest form of county administrator; or mayor, governor, or president, but the department heads may remain the elected row offices, and in this case the executive's authority is weakened. The council performs the legislative role of congress and may be elected at large as commissioners usually are, but often

they are elected as representative of a section of the county. Since county government authority is derived from the state, the council sets policies and approves budget and expenditures, but actual legal actions are severely limited compared to state or federal congress. According to Duncombe (1966), counties with a population of 100,000 or more tend to have this or the administrator form of government (p. 12). The Pro and Con of this government are best given in contrast to the commission.

[Table 2-3]: Pros and Cons of Council-elected Executive Form of County Government

Pros	Cons
1. Stronger leadership in the position of county executive. 2. More chances for professional management of services. An elected executive would not want to limit their appeal by appointing incompetent department heads. 3. More transparent / less power diffusion, so more accountable. 4. Responsive to electorate.	1. Possibility of divisive government as legislators and executive are all beholden to segments of the electorate. 2. Slightly less responsive to electorate than the commission government form.

2.1.2 County Government Use

Based on 3,050 counties with a population of 1,000 and greater, ICMA (2003) documented forms of county governments. In the year 2002, by aggregated mean percentage figure, over 70% of these counties used the commission form of governments, while nearly 16% of counties used the council-elected executive form of government, and approximately 12% of counties had a council-manager government. Although regional analysis is not an area of study in this paper,

it is useful to consider regional effects, Table 2-4 shows county governments adoption within a region.

[Table 2-4]: Percentage of County Government Forms Within Regions

Region	Council-Manager	Council-elected Executive	Commission	Number of Counties
Northeast	10.8	27.8	61.3	194
Midwest	6.4	11.1	82.5	1,054
South	15.0	17.3	67.7	1,379
West	17.2	15.7	67.2	408

Source: The Municipal Year Book, 2003 with author's calculation.
Note: Excluded counties in states of Alaska and Hawaii.

The South has the highest number of county governments and the Northeast has the least number of county governments compared to other regions. The commission form of government is the most prevalently used within all regions. Excluding the commission form of county government, the Northeast uses the council-elected executive form of government the most, while the Midwest uses this form of county government the least. The West uses the council-manager more than any other region, and West adoption of the council-elected executive is only slightly smaller than its use of the council-manager form.

2.2 MUNICIPAL GOVERNMENT

This most local level of government includes townships, towns, and cities. These governments are incorporated by constituents, and thus their authority, while derived from the state, is bottom-up rather than top-down. Public choice theorists view them as civic communities empowered by citizens to engage in important decisions for service packages by allowing citizens to select

communities and by selecting tax-service bundles (Tiebout, 1956; Tiebout, Ostrom, and Warren 1961; Bish and Ostrom, 1973; Ostrom, 1975).

According to Burns (1994), there is an appearance of incentives different than the best interest of the citizens, as for example, a coalition of businesses and middle and upper class citizens may create policies and built environments that keep lower income or other "undesirable" people out of the community. Burns (1994) cites the seemingly large numbers of municipalities that provide no services (2000 of them in 1987) as evidence of this exclusive zoning purpose. More fragmented metropolitan regions are likely to show greater territorial disparities in development because there is little incentive for a small community in a nearby urban region to try to match area needs such as for new jobs and housing opportunities (Lewis, 1996: p. 34).

Many states, particularly in the West and South, have not incorporated all their land as towns, cities, or townships (Ladd, 1998; Stephens and Wikstrom, 2000; Rusk, 2003). In the South and West, counties and cities are the only forms of general purpose government below the state level, hence annexation is the way urban expansion into unincorporated areas occurs (Johnson, Perry, and Lollock, 2000). Counties provide services to the unincorporated areas, and state mechanisms exist for areas to incorporate or join with a nearby corporation (Duncombe, 1966).

2.2.1 Structures of Municipal Government

The typical municipal government provides many services organized by function to its residents through individual municipal departments (Kemp, 2002).

Similar to county forms of governments, there are three types of municipal government. They are commission, mayor-council, and council-manager. In this section, each form of government will be discussed and pros and cons of each will be addressed. New England is not included in the sample study set, so a common municipal government structure in New England, the Town Meeting, is not defined.

1. Commission

The commission government, more common in townships, is similar to the traditional commission form of government at the county level. Originally this government was put forward as a reform movement that sought to apply business principles to government (Miller, 2002). The commissioners are "department head" of one of the major units of the government, and together the commission makes policy decisions as if they are a "company management team."

Kemp (2002) states that this form of government employs non-partisan, at-large elections that includes electing a board of commissioners. They serve as the legislative body of their municipal government. Individual commissioners serve as the head of one or more administrative departments. In this form of government, there is no sharp dichotomy between policy determination and policy implementation because both roles are performed by commissioner, not professionally trained administrators.

[Table 2-5]: Pros and Cons of Commission Form of Municipal Government

Pros	Cons
1. Government is responsive, as the people directly elect those in charge of the service units serving them.	1. The absence of a strong executive creates a leadership vacuum. 2. Politicians as leaders of service units tends to create less efficient and effective service because politicians do not necessarily know about the service. 3. The government is less accountable and less transparent because power is diffused.

2. Mayor-Council

The position of mayor is a traditional executive of a city, like the president or governor. The mayor shares leadership of the city with an individually elected legislative body called the council. When a mayor is elected by the citizens, has veto authority for council resolutions, and prepares the city budget for acceptance by the council, the position is a "strong" mayor. In cities where the mayor has no executive role, the position is traditional / ceremonial, and it is a "weak" mayor. The "weak" mayor cities usually have a professional "city manager" to perform the duties of an executive for the government (DeSantis and Renner, 2002: p. 71-80). These weak mayoral cities are usually council-manager form of government that happen to keep the traditional mayoral position, but they could be commission governments with an elected or appointed mayor.

[Table 2-6]: Pros and Cons of Mayor-Council Form of Municipal Government

	Pros			Cons	
Category	**Strong Mayor**	**Weak Mayor**	**Category**	**Strong Mayor**	**Weak Mayor**
More visible public leadership	Yes	Yes	Less responsive than commission	Yes	Yes
Leadership that affects policy, budget, etc	Yes	No	Less professional than council-manager	Yes	Yes
Politically responsive (compared to Council-manager)	Yes	Yes			

3. Council-Manager

The council-manager is similar to the mayor-council government, but the administrator is an appointed manager, answerable to the council, rather than an elected mayor. Lately there has been a blurring of the mayor-council and council-manager governments, as many mayor-council governments hire professional managers.

[Table 2-7]: Pros and Cons of Council-Manager Form of Municipal Government

Pros	Cons
1. More professional. 2. Less tendency to partisan politics (Nalbandian, 1991: p. 11). 3. Professional managers code of ethics and administrative knowledge.	1. Less visible public leadership (than the strong mayor). 2. Less responsive (the manager is not beholden to the public as the mayor is).

2.2.2 Municipal Government Use

Table 2-8 presents forms of municipal governments in the U.S. by region. The mayor-council form of government is highly adopted in the Midwest, and also in the Northeast. The West presents the lowest adoption of this form of government. The council-manager form of government is mostly used by West and South while the Midwest and Northeast show a moderate adoption rate. The commission form of government use is insignificant except in the Northeast and Midwest, where it is still low, at 3% or less.

[Table 2-8]: Percentage of Municipal Government Forms by Region

Region	Total Reported	Mayor-council	Council manager	Commission
Northeast	666	46.0	51.0	3.0
Midwest	1,354	53.0	45.4	1.6
South	1,146	34.7	64.7	0.6
West	742	25.6	74.4	0.0

Source: MacManus and Bullock in The Municipal Year Book, 2003.
Note: Excluded town meeting and representative town meeting.

2.3 SPECIAL DISTRICT GOVERNMENT

Special districts are generally single-purpose governments, created by one or more state, county or municipal governments, and functioning in one or more local jurisdictions. They are in some ways local governments, as they tend to deal directly with constituents, as described in the major theoretical work on special districts (Burns, 1994). "Special districts are often established to subsidize developers indirectly or to fuel growth, particularly at the outer frontiers of metropolitan areas" (Lewis, 1996).

Chicoine and Walzer (1985) describe the multiplicity of interests and different hierarchical structures involved with special districts, because any level of local government as well as the state can create special districts. Chicoine and Walzer cite a 1977 study of Springfield, IL, where because of the "15 independent or semi-independent government organizations," citizens can receive the same services but pay property taxes differently (1985: p. 94). The hierarchical structure may underlie an inexplicit principal-agent relationship. Special districts are not the "agents of the state" that counties are, nor are they as representative as local governments.

Principle-agency theory assumes a series of contractual or agreed upon relationships and contributes to quality such as competition, customer service orientation, and accountability for meeting standards from traditional hierarchy concept orientation (Kamensky, 1996).

[Table 2-9]: Pros and Cons of Special Districts

Pros	Cons
1. Allows creation of a unit of government specifically for a particular service, and abandonment of the government when the service is no longer needed (usually for development). 2. Allows citizens in a subunit of a municipality interested in a particular service not offered by the municipality to create a government to provide that service. 3. Allows municipalities or other government units to create a government that crosses traditional governmental boundaries to engender economies of scale when providing a service. 4. Allows governments to add a service (or separate a service) without increasing taxes, as the new government, the special district, has its own revenue authority. 5. Allows governments fund and monitor service provision separately from other general-purpose government services. 6. Provide a mechanism to separate particular government service financially and politically from the primary government. 7. Mechanism by which governments can collaborate	1. There is no oversight or coordination of special districts, so service areas can overlap, creating excessive costs for citizens. 2. Lack of accountability to citizens when special district leaders are not elected and have little visibility in the community. When leadership is elected, voter turnout is around 5% (Burns 1994, p 12). 3. Less responsive as citizens do not involve in establishment. 4. Work well as a cooperative mechanism within their service area, but prevents more substantial regional cooperation.

Pros	Cons
to provide service. 8. Mechanism by which outsourcing or "insourcing" can be done without changing the way citizens pay for the service when the provider changes, and service provision contracts can be maintained.	

2.3.1 Special Districts: Public Choice and Public Interest

Public choice largely promotes homogeneous community (Tiebout, 1956). As communities provide services of interest to some majority of citizens, over time, those not interested in those services leave and other citizens are attracted. This creates a self-reinforcing separation of citizens in different homogeneous municipalities. Theorists such as Bollens (1957: p. 255) critique of special districts is that it creates inequitable, inefficient, and irrational competition for public monies due to the lack of coordination among governments.

[Table 2-10]: Aid for Special Districts (per Dollar of Own Source Revenue)

	Aid per $ of Own Source Revenue		
Intergovernmental grants	**1972**	**2002**	**Change (%)**
Federal Government	0.29	0.16	-44.8
State Government	0.04	0.08	100.0
Local Government	0.10	0.07	-30.0
Total Intergovernmental Grants	0.44	0.31	-29.5

Source: Burns (1994: p. 14) and U.S. Census of Governments, vol. 4, no. 2, 2002.

The general financial trend of special districts in the United States is local independence. Table 3-5 shows reduced funding of special district from local governments, but an increase in funding

from federal sources. Still, special districts are becoming more independent by increasing their capacity to generate larger internal revenue while reducing intergovernmental grants for operation. With the rapid increase in special districts, internal revenue generation increased more than 19 times during the three decade period (5,261 million in 1972 to 102,395 million in 2002), while matching aid per dollar of internal revenue decreased nearly by 30 percent as seen table in Table 2-10. By 2002 intergovernmental grants to special districts are $0.31 per dollar of special districts' own source revenues. Although the matching grants from three tiers of governments are reduced from $0.44 in 1972, there is an increasing burden on state governments. The burden on state governments doubled between 1972 and 2002, while federal government burden fell by nearly 45 percent and local governments burden fell by 30 percent. This may be because federal government favors block grants to the states to support many local initiatives, such as the change in welfare programs in 1996 (see http://www.whitehouse.gov/news/releases/2002/02/welfare-book-03.html). Governments first responsibility is to provide for its members, the citizens (Olson, 1965: p. 15).

Many researchers are concerned that the governing body of special districts is not as representative as general purpose governments (Burns, 1994; Foster, 1997b; Chicoine and Walzer, 1985; Stephens and Wikstrom, 2000). Another criticism is that special district formation is due to failure of state government to equip general local government with [discretionary decision] power (Tees, 1971, quoted in MacManus, 1981). Establishment of special districts avoids "state constitutional and statutory restrictions on local government taxing and borrowing powers" (MacManus, 1981: p. 1208). Also special districts are market-oriented public service and "when public decisions become regulated by quasi-market mechanisms rather than

democratic processes, citizenship skills erode and civic identity becomes overly tied to parochial concerns." (Tocqueville, 1969, quoted in Oliver, 1999).

2.3.2 Special Districts, Collective Goods, and Regional Service

The collective good in terms of the municipality or special district is different from collective for the region. For example, within the municipalities the local governments decide land use but the effects of those decisions are often regional due to economic links in the region. When public goods are strained within a municipal boundary or special district service area, there may be regional inefficiencies in many public goods and services, or inequities in citizens' financial burden.

However, financing services through special districts can relieve property tax burden. MacManus' (1981) study focusing on the South found that use of tax-based special districts for property-tax burden was a fiscally effective mechanism during 1970s. "[T]he rate of increase in special districts is related negatively to the rate of increase in operating expenditure level" (p. 1213). Also special districts can capture economies of scope as well as economies of scale when they span municipalities affecting fiscal structure in metropolitan areas. Lewis (1996) states that forming an area wide special purpose government does not contribute to fragmentation because of its capability to capture regional-wide externalities, or explained in another way, a single area-wide service provider is less fragmenting than many municipal-based special purpose governments.

Special districts are often related to economic development and private sector capital investment and increase the capacity of infrastructure in peripheral areas (Burns, 1994; Lewis, 1996: p. 36; Nunn and Schoedel, 1997; Foster, 1997b). It provides infrastructure to support residential and nonresidential construction and to provide public services without municipal incorporation (Burns, 1994; Nunn and Schoedel, 1997). In addition, it provides more flexibility in the issuance of debt to finance economic development. Special districts were also used as a important financing mechanism for rapid growth policies as well as creating public-private partnerships (Nunn and Schoedel, 1997: p. 61-63). Burns (1994) states that;

> ...special districts...can fund the provision of infrastructure to improve land and make it valuable for development. These governments are able to lower the costs and the risks of development...residents agree to support the formation of the new district….Developers have considered these districts as alternative to annexation since at least the 1950s. Recently, developers have come to see these districts as a way around impact fees (p. 26).

For critics of special districts, the underlying concern for serving private interest is with changes in demographic conditions and related fiscal constraints such as the tax burden and spending commitments to provide adequate services. Development after all is mainly caused by changes in demographic conditions and income. These, then, causes changes in service demand, resulting in fiscal strain and incentives to consolidate services with other communities. Based on regression analysis to measure development effect on local spending and tax burdens, Ladd (1998) suggests that sparsely and densely populated areas generate higher public sector costs

than moderately dense areas. This is so called a U-shaped relationship between the growth in per capita spending and the rate of population growth.

2.4 SUMMARY

In the U.S., public services are provided within overlapping jurisdictions. The primary responsibilities of county government is state services and area wide functions, but county governments often provide services that are usually provided by municipalities or special districts to unincorporated areas. County governments have several different formal forms of organizational structure. In 2002 over 70% of the counties are using the commission form of government, which tends to be less professional, and with less visible leadership, but it is conceived as more responsive to citizens. Within a region the commission form is the most commonly adopted in the Midwest and South. However there is a national trend to adopt a council with a professional manager, or an elected executive.

Forms of municipal government include townships, towns, and cities. In terms of municipal government structure, the mayor-council form of governments are highly adopted in the Midwest followed by the South. This form of government is more responsive to citizens, although less professional than the council-manager form of government. The council-manager form of government is most often adopted in the West. Although there may be a lack of leadership and responsiveness to citizens, this form of government is more professional and has less tendency toward partisan politics. By 2002 central cities had adopted the council-manager form of government the most among other forms of government. In the municipal organizational structure, the commission form of government is less popular.

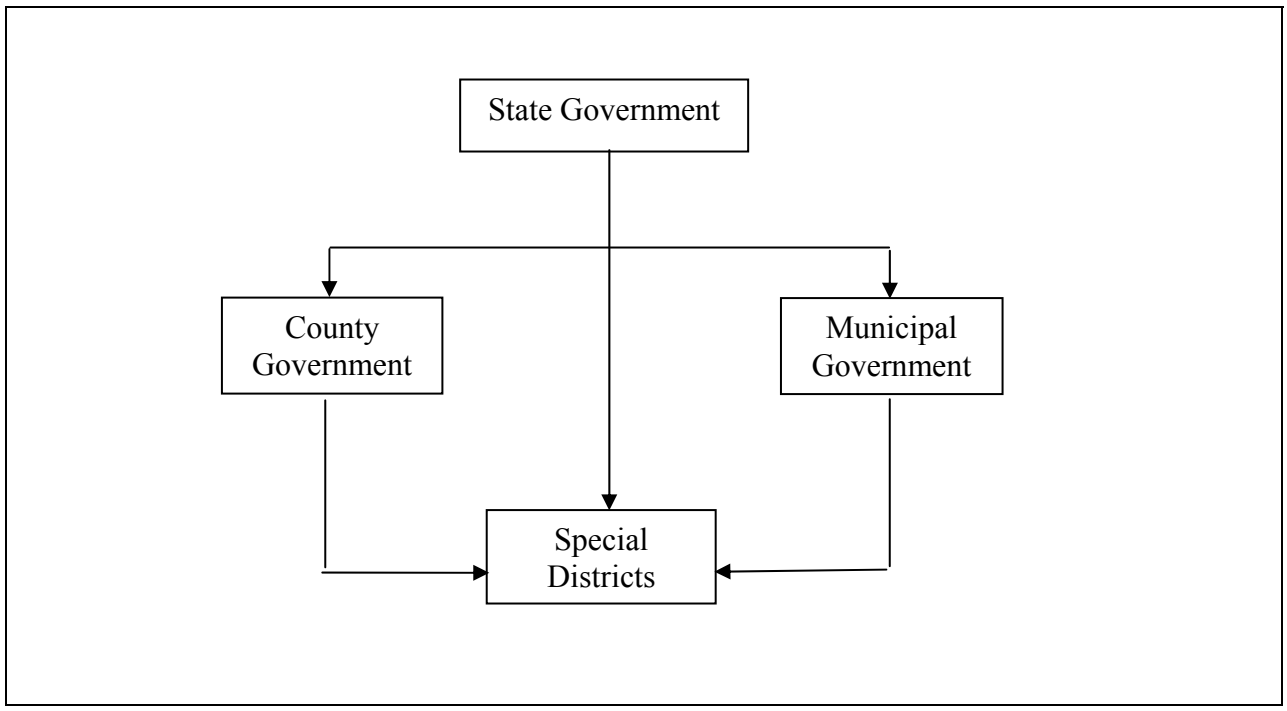

Figure 2-1: Structure of Local Government

Special districts exhibit ad hoc formation since states or general purpose local governments can create them. A major advantage of this government is minimal cost involved to maintain status quo without increasing taxes, as the new government, the special district, has its own revenue authority. The disadvantage of this government is adding complexity and further fragmentation to the mix of demographic change and responding to increasing public interests.

3.0 LOCAL GOVERNMENTS AND PUBLIC SERVICE

Municipalities, cities, or towns are usually established under the laws of their states and initiated by citizens, but counties were created by state legislatures as sub units of the state governments, providing services such as record-keeping on behalf of the state. Municipalities are often incorporated and have some level of authority, being only indirectly ruled by state power. Special districts might be agents of the state government, but often not directly because all three governments; state, county and municipal, may establish special districts (Miller, 2002). This leads to a complex set of overlapping levels of authority, as shown in Table 3-1.

[Table 3-1]: Authority Characteristics of Local Governments

Types of Gov't	**Proprietary Function**		**Legality Limitation**		**Discretionary Power**	**Operational Capacity**
	Corp.	Quasi-Corp.	Authority from State Gov't	Subject to Suit	Ordinance Power	Cross Boundary Service
County		●	●	●		●
Municipality	●		●	●	●	
Special Districts		●		●		●

Source: Chicoine and Walzer,1985; Zimmerman, 1992; Stephen and Wikstrom, 2000.
Note: * Excluded school districts; towns and township are treated as municipalities.

The incorporated nature of municipalities means they are operated much like a business, although subject to more contact and legal control by the state government than for-profit private enterprises. This control is not operational, the "corporation" conducts its business apart from

the state, and also the county. Although the municipalities are geographically within the county, there is no federal-system relationship between them (except Miami-Dade county in Florida); they both derive authority from the state. Within the complex state system, local service provision is intertwined with the local-state relationship with many state imposed restrictions such as debt limits (Chicoine and Walzer, 1985**;** Burns, 1994), fiscal conditions (Ladd and Yinger, 1989; Stein, 1984), range of service functions, and each local governments' level of service performed (Liebert, 1974; Dye and Garcia, 1978; Stein, 1982; Park, 1996) as well as local socio-economic conditions (Dye and MacManus, 1990) and policy outcomes (Peterson, 1981; Park, 1996).

3.1 COUNTY GOVERNMENT ROLE AND GOVERNANCE

Currently, counties serve all residents with state functions, and oftentimes serve basic local services in unincorporated areas of the county. For many decades, the county role in public services measured by expenditure is large in local public service provision and its role is increasing in many service functions as well as cooperative role with other governments and other parties (Benton and Menzel, 1993; Finances of County Governments from Census Bureau, 2002). "Counties often function as key elements in the cooperative system or the network of local governments that hold the system together, and…participate in various types of cooperative undertakings. They supply services under contract to municipal governments and jointly plan, finance, or deliver services on the basis of agreements with other local metropolitan or regional association" (Berman, 1993: p. 135-142). With this increasing service role of county governments in the United States, governance structure in urban areas has to cope with a need for increasing administrative capacity for performance improvement.

County governments are primarily established by state government as constitutionally recognized legal subdivisions. However county government have relations to other governments which are broad in two scopes; 1) county federal relationships; and 2) county relationship with other units of local government (Duncombe, 1966).

First, federal agencies provide counties a variety of information such as statistics, documentation, research reports as well as advisory, consulting, and training services. Federal grants are channeled through the state government. Also agricultural and environment issues are often cooperatively managed by federal, state, and county governments as a partnership.

Second, although historically counties are established to deliver a limited set of services within their geographic boundaries (DeSantis and Renner, 1993: p. 81), there are many forms of intergovernmental relationships in many counties; 1) as a legal and fiscal arm of state in relationships with townships and special districts; 2) as a vendor of services to other local governmental units; 3) as a purchaser of governmental services; 4) as creator of dependent districts and service areas, 5) as a participants in informal cooperative arrangements; 6) as a partner in joint city-county agencies; 7) as a partner in inter-county agencies; and 8) as a participant in voluntary regional conferences.

Among counties with a public manager or an elected executive, the innovator and facilitator model as developed for mayoral and manager leadership in cities may be useful (Dahl, 1961; George 1968; Cunningham 1970; all in Svara, 1996). However, it is important to recognize the

more complex environment county leaders find themselves in compared to city leaders. County leaders must contend with similar administrative and legislative bodies, and in addition, must be able to integrate departments related to state functions, and the municipalities which are geographically within the counties (Svara, 1996).

3.2 MUNICIPAL GOVERNMENT ROLE AND GOVERNANCE

A municipality serves its residents in its incorporated area. Benton and Menzel (1993) state that "Growth in unincorporated America between 1980 and 1990 registered a 9 percent gain compared to an 8 percent gain in incorporated America. In rapid-growth states like Florida, the population growth in unincorporated areas has been much more dramatic….In fact, 51 percent of Florida's population currently resides outside the state's municipalities" (p. 55).

According to the public choice theory, municipalities compete with each other for favorable population within their region (Tiebout, 1956). In practice this means they need to be responsive to their citizens, and they also need to maximize service provided and minimize costs to the citizens. An economic shortcoming of municipalities' ability to provide services in many cases is that they are unlikely to capture economies of scale because of their limited geographical area and population. For example, the cost of pavement per mile cannot be reduced by buying supplies less expensively in bulk, since the number of roads within the municipality are limited. These two factors contribute to an incentive to cooperate in service provision, or the use of financing mechanisms to shift citizen costs from taxes to paying another agency for services whenever possible, or both.

Since the 1970s, local areas are more geared to narrowly focused program and development oriented services, and away from redistributive policy (Peterson, 1995). A consequence of competition for favorable population (which usually means the more affluent) is that the metropolitan region becomes stratified, with wealthy suburbs surrounding the central city, which retains the less well-off because of the lower property values and established public transportation network (Orfield, 1997; Rusk, 2003).

Lowered tax base from population loss or unemployment produces a condition where a significant percentage of the city population is dependent on the city for basic goods and services (Stein, 1984). Both levels of government experience constraints for meeting service demand from residents. Counties have pressure of serving increasing population outside of incorporated areas. Major urban center municipalities (the central cities) are constrained with population loss, and unfavorable fiscal and economic health (Ladd and Yinger, 1989). Growing municipalities face service demands that may require new infrastructure. All governments are under citizen pressure to reduce taxes, as well as from mandates from higher order governments. In order to circumvent the constraints and maintain service provision responsibility, there is tendency for a reliance on special districts (Chicoine and Walzer, 1985; Burns, 1994; Stephens and Wikstrom, 2000).

Often this results in the three types of local government being involved with many of the same functions. While it is difficult with the present data to know how much any particular population has duplicate services, it is certain that many local services provided by different governments within the metropolitan regions encompass services that might be better provided on a regional

basis, and there may be services provided by counties that could be relegated to the municipalities. In any event, it is useful to know about which level of government produces efficient and effective services in which areas. Table 3-2 lists the functions that may be provided by local governments for comparison.

[Table 3-2]: Service Function Categories by Type of Local Government

Categories	County	Municipality	Special District
Governmental Admin.	Yes	Yes	No
Social Service and Income Maintenance	Yes	Yes	No public welfare
Transportation	No parking facility; no water transportation	No parking facility; no water transportation	No transit subsidies; no other transportation
Public Safety	Yes	Yes	No correction; no protective inspection and regulation
Environment and Housing	Yes	Yes	Yes
Library, Educational	Yes	Yes	Yes
Utility	Yes	Yes	Yes
Liquor Store	Yes	Yes	
Employee Retirement	Yes	Yes	Yes
Debt Management	Yes	Yes	Yes

Sources:
1) 2002 Census of Governments, vol. 4, no. 2, Table 1, Finances of Special District Governments.
2) 2002 Census of Governments, vol. 4, no. 3, Table 1, Finances of County Governments.
3) 2002 Census of Governments, vol. 4, no. 4, Table 1, Finances of Municipal and Township Governments.

Governmental Administration: Financial administration, Judicial and legal, General public building, and Other governmental administration.

Social Service and Income Maintenance: Public welfare, Hospitals, and Health.

Transportation: Highway, Air transportation, Transit subsidies, Other transportation, Parking facilities, and Water transportation and terminals.

Public Safety: Police protection, Fire protection, Correction, and Protective inspection and regulation.

*Environment and Housing***:** Natural resources, Parks and recreation, Housing and community development, Sewerage, and Solid waste management.

Educational: Library.

3.3 AREA-WIDE SERVICE PROVISION

In U.S. history to approximately 1940, most of the population centers in the Northeast region underwent major structural reorganization as they grew in population and geographical size by merging with, or annexing smaller jurisdictions. The expansion of cities in the Northeast was largely halted by the ability of suburban municipal corporations to resist the cities. Over the last half century, cities in the South and West have experienced growth by expanding into areas that were not incorporated, with some annexation (Mogulof, 1972; Stephens and Wikstrom, 2000; Frug, 2002; Rusk, 2003).

This paper discusses the local conditions and service share relationships of local governments in single metropolitan counties. It is worth noting the importance of the role of the state legislation

under which local governments of all types receive their ability to operate, as is shown by municipal governments authority to resist assimilation by larger municipalities. State legislation and incentives have a great impact on local government cooperation (School District and Municipal Reorganization: Research Findings & Policy Proposals, 2007). An analysis of the effect of legislation and incentives on local government action is not in the scope of the analysis of this dissertation, however, this dissertation lays the groundwork for a future study which incorporates the economic-demographic conditions, government structure, and government service responsibilities with the type of legislative controls on the local governments, and the types of state incentive programs that promote local government cooperation.

As mentioned earlier, public service in the United States is increasingly provided through new formation of special districts. This contributes to increasing fragmentation. Wildavsky (1966) states that budget efficiency cannot be achieved through the fragmented nature of units within governments. The same fragmentation and budget efficiency must also apply to the multiple local governments in the metropolitan areas.

"If counties had not existed at the beginning of the decade, something like them would probably have been invented by the end of it to deliver sub-regional and regional service" (Dodge, 1990: p. 358). Counties are the largest unit of local government, except for five metropolitan governments created in recent decades. Dodge's comments, the history of structural city expansion, formation of metropolitan governments (merged city-county or regional councils), the incentives for municipalities to provide services efficiently, and equity concerns are evidence of pressures for area wide governance. But the state laws granting local governments corporation

status has been an effective impediment to formal, that is structural regional governance. Although the fragmentation of metropolitan areas into multiple municipalities can be said to be inequitable and inefficient, it also provides for more responsive government, and different levels of service and cost from which citizens may choose. According to Post and Stein (2000), fragmented metropolitan area governance does not directly influence urban-suburban economic dependence (p. 56). Also Parks and Oakerson (1993) state that overlapping jurisdictional boundaries among counties and municipalities can facilitate intergovernmental cooperation (p. 38-39). In this regard, there has been increasing concern and interest in area-wide cooperation based on a growing understanding of local interdependence and the need for continuation of economic progress of the area-wide as a whole (Hill, Wolman, and Ford, 1995; Orfield, 1997; Peirce, Johnson, and Hall, 1993; Savitch and Vogel, 1996; Rusk, 2003). The Intermodal Surface Transportation Efficiency Act of 1991 grants the federal transportation relationship to a single agency (the Metropolitan Planning Organization, or MPO) within a metropolitan area that is to decide allocation of federal transportation funds in the area (Miller, 2002). This gives much greater authority to any semi-formal metropolitan governmental councils and further increases a movement toward area-wide planning and development.

Structural area-wide service provision means municipal mergers or annexations to form a government serving a larger geographical area. This practice, not uncommon in the northeast until the 1950s, and in the south and west until recently, has not been favored in recent years. And yet already in existence is a larger structural government, which is the county. A series of policies and practices have prevented a larger county-wide role in service provision. Federal policies have favored decentralization by awarding grants to cities and municipalities, and the

municipalities have been reluctant to give up independent revenue and action. State policies sometimes do not permit counties to perform these services (Chicone and Walzer, 1985; Zimmerman, 1992; Stephen and Wikstrom, 2000).

County governments taking on a role of municipal services can largely capture efficiency and equity benefits (Berman 1993: p. 135-142) and they demonstrate an increasing role in metropolitan areas, as seen by service expenditure analysis (Benton and Menzel, 1993; Finances of County Governments from Census Bureau, 2002).

There are two ways for area-wide action without a government structure. They are the modern regional service approaches of administrative and fiscal regionalism that can be defined when it is desirable for financial or equity reasons (Miller, 2002).

In the administrative approach, special districts can deliver a particular public service and can be created by counties, or by multiple municipalities as needed. They are administrative units that can span governmental jurisdictions to offer practical solutions to area-wide problems, economies of scale for those services that benefit from scale, and they do not interrupt the authority of the county or municipal governments (Miller, 2002). Inter-local agreements are also administrative. They are cooperative arrangements formed by negotiation between two or more local governments, which is often encouraged by the state (Miller, 2002). Such a network approach was promoted by Dodge (1996) and Savitch and Vogel (1996). Lessons can be learned from existing practice. For example, Louisville, Pittsburgh, Washington D.C., and the Regional Efficiency Development Incentive Program (REDI) in New Jersey.

The financial cooperation of fiscal approach can be a "fiscal equivalent of a regional government without the regional government" (Miller, 2002). This has an effect of reducing municipal government competition for siting of stores and businesses in their jurisdiction, spreading the costs and benefits of development among more municipalities as they are affected, and "levels the playing field" between wealthy and less affluent portions of a metropolitan area to reduce the trend toward increased disparity. There are several methods for fiscal approach: cultural asset districts, tax-base sharing, and "peaceful coexistence strategies." Cultural asset districts provide a mechanism for suburban areas to support cultural assets such as zoos, museums, and so on, which are usually located in the central cities which tend to be less fiscally capable in current times. Tax-base sharing is a way for more affluent neighborhoods and municipalities to share finances with less affluent neighborhoods and municipalities. The distinctive feature of tax-base sharing is that the funds are distributed to municipalities rather than cultural organizations. Peaceful coexistence strategies contain elements of either cultural asset districts or tax-base sharing, but their signature characteristic is that the agreement is between incorporated and non-incorporated areas, such as between a central city and a rural county.

3.4 INTERGOVERNMENTAL RELATIONSHIP: REVENUES AND EXPENDITURE

As mentioned in previous sections in this chapter, county, municipality, and special district governments provide public services. In this section, tax revenue and expenditure between local governments will be discussed. Also levels of expenditure for functions from local governments will be demonstrated.

1. Revenue Source

Ability to generate revenue enables local government power (Klase, Mok, and Pops, 1996; Ladd, 1998). "[T]he power to tax permits local governments to raise revenue to provide services such as public safety, health, transportation, education and social services" and local governments take into account the property tax burden in other jurisdictions to differentiate their community fiscally from the others when making their own tax decisions (Ladd, 1998: p. 1; Ladd, 1992). In the U.S., property tax is a primary revenue source for local governments. In particular the property tax is the most important county tax and an overall increase in tax effort in a metropolitan areas may negatively affect overall employment growth (Bowman, MacManus, and Mikesell, 1992; Cigler, 1996: p. 175). Over time the traditional property tax revenue stream has become limited by exemptions and by re-definitions of property (Ladd, 1998), so that between 1927-2002, the property tax as a percentage of own-source revenue for all types of local government has declined by nearly 64% (see Appendix Table A-5 for property tax trend).

To illustrate the recent local property tax trend, proportion of property tax from own tax revenue, and proportion of property tax from total general revenue are shown in Table 3-3.

[Table 3-3]: Percentage of Property Tax Revenue and Change by Type of Local Government, 1991/92–2001/02

	As a percentage of own taxes			As a percentage of general revenue		
Governments	1991/92	2001/02	% Change 1991/92 – 2001/02	1991/92	2001/02	% Change 1991/92 – 2001/02
County	74.4	69.1	-7.0	27.8	24.2	-13.0
Municipality	52.9	48.6	-8.2	23.1	20.4	-11.6
Special district	66.8	69.8	4.6	10.7	11.0	2.7

Sources:
1) 2002 Census of Governments, vol. 4, no. 2, Table 1, Finances of Special District Governments.
2) 2002 Census of Governments, vol. 4, no. 3, Table 1, Finances of County Governments.
3) 2002 Census of Governments, vol. 4, no. 4, Table 1, Finances of Municipal and Township Governments.

As seen in Table 3-3, the percentage change in proportion of property tax as a percentage of own taxes as well as a percentage of general revenue has been negative for both county and municipal governments. Increasing revenue can be seen only in special districts. The negative change in percentage of general revenue for county is larger than that of municipality.

During the period 1991/92-2001/02, Table 3-4 shows that total local government revenue increased by 69% (liquor store and employee retirement revenue are excluded). However, the percentage of both own revenue sources and utility revenue has decreased by 6.5%. Offsetting this revenue loss is an increase in revenue from intergovernmental sources, by 6.6%.

[Table 3-4]: Local Government Revenue Source, 1991/92-2001/02 (in Mil.)

	Years		Percentage to Total Revenue		
	1991/92	2001/02	1991/92	2001/02	Change
Intergovernmental revenue	119,609	215,188	27.9	29.7	6.6
Fed	18,512	38,903	_	_	_
State	90,485	157,753	_	_	_
Local	10,613	18,533	_	_	_
Own Revenue	254,306	420,218	59.3	58.0	-2.1
Utility	55,010	88,790	12.8	12.3	-4.4
Total Revenue	428,925	724,196			

Sources:
1) 2002 Census of Governments, vol. 4, no. 2, Table 1, Finances of Special District Governments.
2) 2002 Census of Governments, vol. 4, no. 3, Table 1, Finances of County Governments.
3) 2002 Census of Governments, vol. 4, no. 4, Table 1, Finances of Municipal and Township Governments.

A further break down of the revenue source changes by category and type of government in Table 3-5 reveals that special district revenue from state, county government or the federal government has increased substantially. It also shows a large decrease for local government funding of special districts.

[Table 3-5]: Changes in Revenue Source by Type of Local Government, 1991/92-2001/02 (in Mil.)

	Percentage Change 1991/92-2001/02			Percentage Change in Ratio of Revenue Source to Total Revenue, 1991/92-2001/02			
Revenue Source	County	Municipal	Special District	County	Municipal	Special District	All
Intergov't revenue	68.2	50.0	80.5	2.9	6.5	16.5	6.6
Fed	78.4	72.0	111.7	34.1	16.2	24.1	_
State	132.5	87.6	125.6	0.8	3.4	37.3	_
Local	74.7	66.9	149.5	5.2	16.5	-13.3	_
Own Revenue	82.3	88.1	57.6	-2.0	-1.2	-4.6	-2.1
Utility	69.8	59.5	73.5	14.8	-4.8	-4.7	-4.4
Total Revenue	98.9	53.7	73.3	_	_		_

Sources:
1) 2002 Census of Governments, vol. 4, no. 2, Table 1, Finances of Special District Governments.
2) 2002 Census of Governments, vol. 4, no. 3, Table 1, Finances of County Governments.
3) 2002 Census of Governments, vol. 4, no. 4, Table 1, Finances of Municipal and Township Governments.

Based on percentage change in ratio of revenue source to total revenue, internal revenue is decreasing in the general-purpose county and municipal governments, and especially in special districts. The table also shows that revenue from other governments is increasing by the same level. Table 3-5 shows two groups of governments; grantors and recipients. The two groups are not exclusive, note that the three recipients together comprise the grantor level "local." Overall, of all government grantors, the federal level has increased its funding the most, and for all types of local governments. For recipients, special districts have benefited the most from funding from other governments, although county and municipal funding to special district has declined. Peterson (1995) claimed that redistribution is favorable from higher order governments rather than lower levels of government, and local governments are preferable for development. An

increase in the percentage change in the revenue source to total revenue ratio of federal and state funding of local governments could be seen as an indication of redistribution for economic development (Burns, 1994; Lewis,1996). The table shows that special districts are benefiting the most of intergovernmental revenue from federal and state governments.

That revenue source from local governments for counties and municipalities increased by 5.2% and 16.5% is apparently an indication of contracting out services to other local governments, whereas there is a decrease in local government funding for special districts. This shows that the relationship between local governments in general is enhanced by the transfer payments, except for special districts. The decrease in funding from local governments for special districts is 13.3%, showing a decrease in strength of relationship between local governments, and loss of influence on special districts from the general purpose local governments that sponsored them.

2. Expenditures

The comparative position of county governments with municipal or special purpose governments is that counties generally exhibit more inclusive governance and the ability to capture "economies of scale, and a more stable and equitable tax base" (Berman, 1993: p. 137). This can be seen in the major expenditure category for counties, which was social service and income maintenance in the periods 1991/92 and 2001/02 (Figure 3-1 and Figure 3-2). The largest expenditure increase can be seen in Public Safety function (see Appendix Table A-6). Table 3-6 shows expenditure by local governments and changes between 1991/92 and 2001/02.

[Table 3-6]: Expenditure by Type of Local Government (in Mil.)

	1991/92	2001/02	Change	% Change
County	110,037	184,640	74,603	67.8
Municipality	125,514	204,351	78,837	62.8
Special District	31,995	59,653	27,658	86.4

Sources:
1) 2002 Census of Governments, vol. 4, no. 2, Table 1, Finances of Special District Governments.
2) 2002 Census of Governments, vol. 4, no. 3, Table 1, Finances of County Governments.
3) 2002 Census of Governments, vol. 4, no. 4, Table 1, Finances of Municipal and Township Governments.
Note: Selected expenditure by function (see Appendix Table A-6).

During 1991/92-2001/02, county government expenditure is slightly less than municipal government. However the percentage change in expenditure in current dollar figure is higher than that of municipal government, although lagging behind special districts.

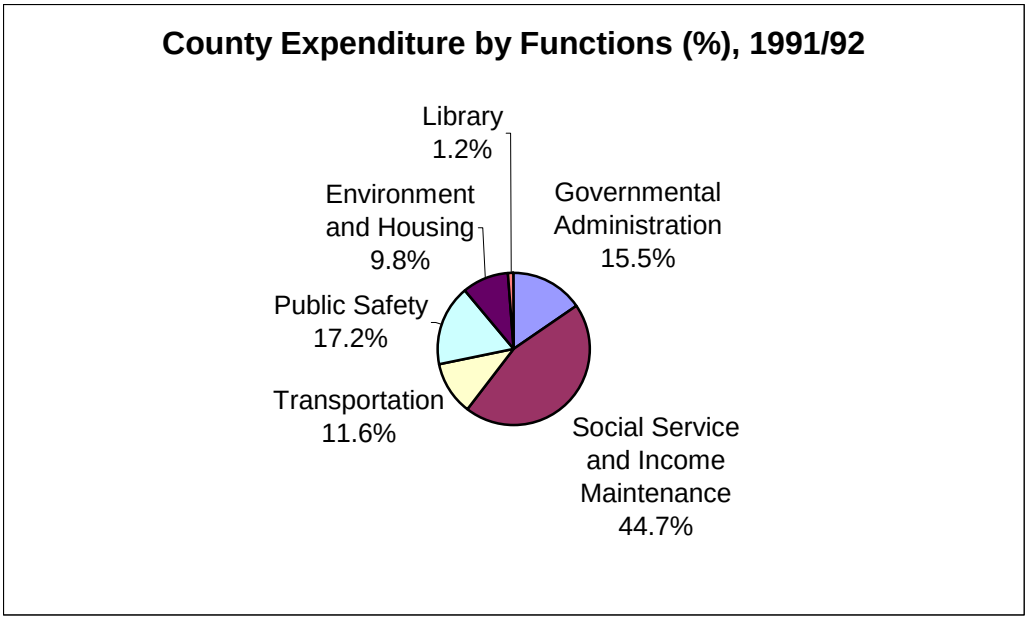

Figure 3-1: Proportion of County Expenditure by Functions, 1991/92

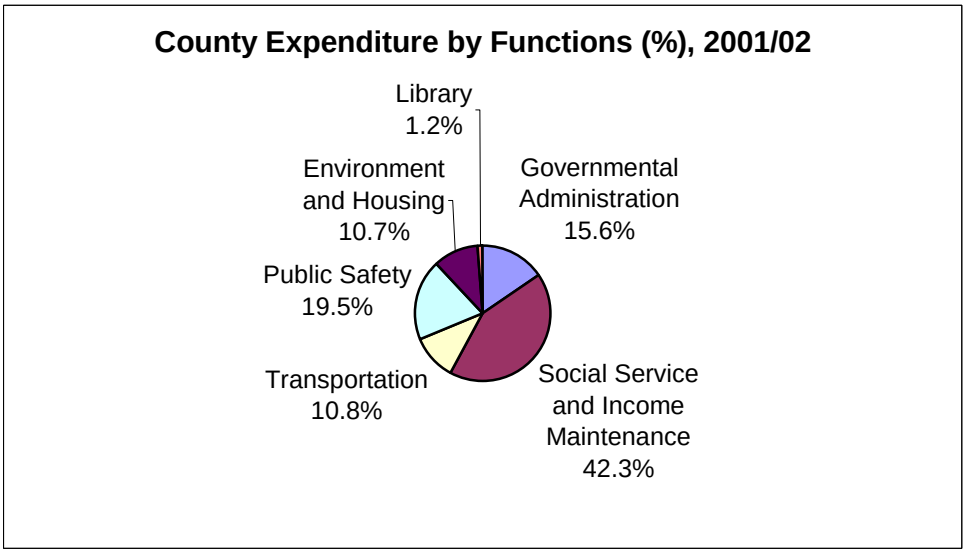

Figure 3-2: Proportion of County Expenditure by Functions, 2001/02

Figure 3-1 and Figure 3-2 illustrate county proportional expenditure to total expenditure for six major service functions. Although there are current dollar differences for expenditure, the proportion of expenditure for administration, library, environment and housing, public safety, and transportation account for nearly 50% of total expenditure. However, social service and income maintenance functions represent more than 40% of expenditures during 1991/92 to 2001/02.

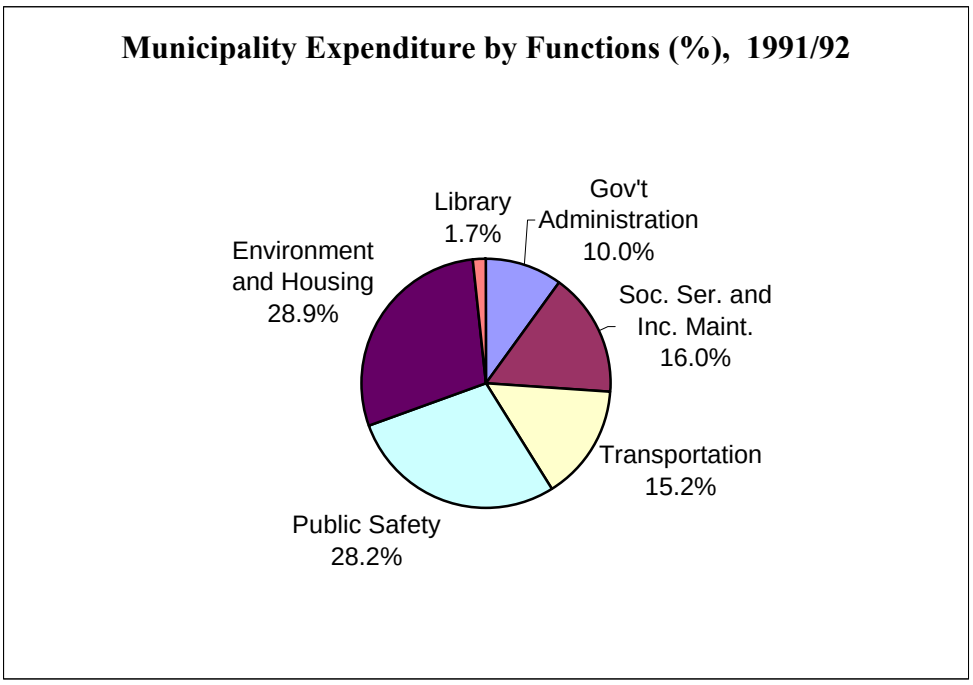

Figure 3-3: Proportion of Municipality Expenditure by Functions, 1991/92

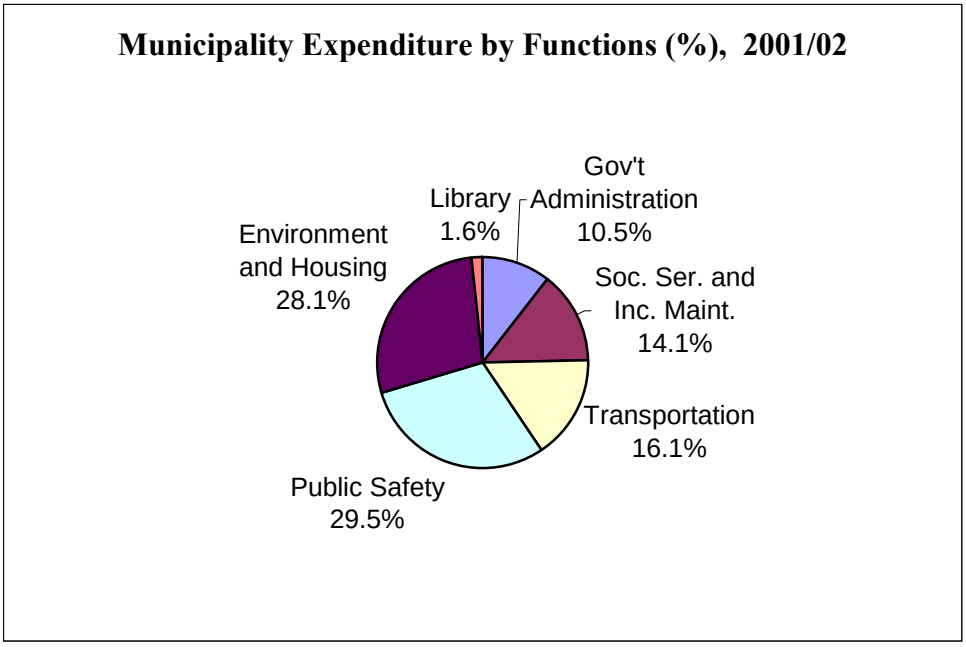

Figure 3-4: Proportion of Municipality Expenditure by Functions, 2001/02

During the period between 1991/92 and 2001/02, the services in which municipal government spent the most are in two types of service categories. They are public safety, and environment and housing, with proportional service level at nearly 30% for each function. The least area is library service. The largest expenditure increase can be seen in transportation, by 71.9% (See Appendix Table A-6, municipal column). And the least increased area is social service and income maintenance (Also see Appendix Table A-6, municipal column).

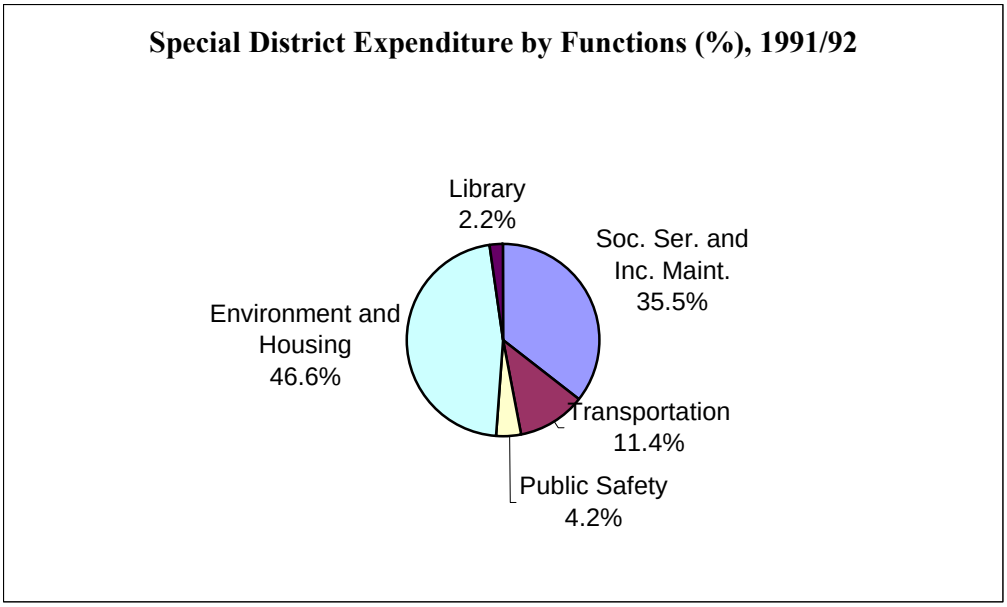

Figure 3-5: Proportion of Special District Expenditure by Functions, 1991/92

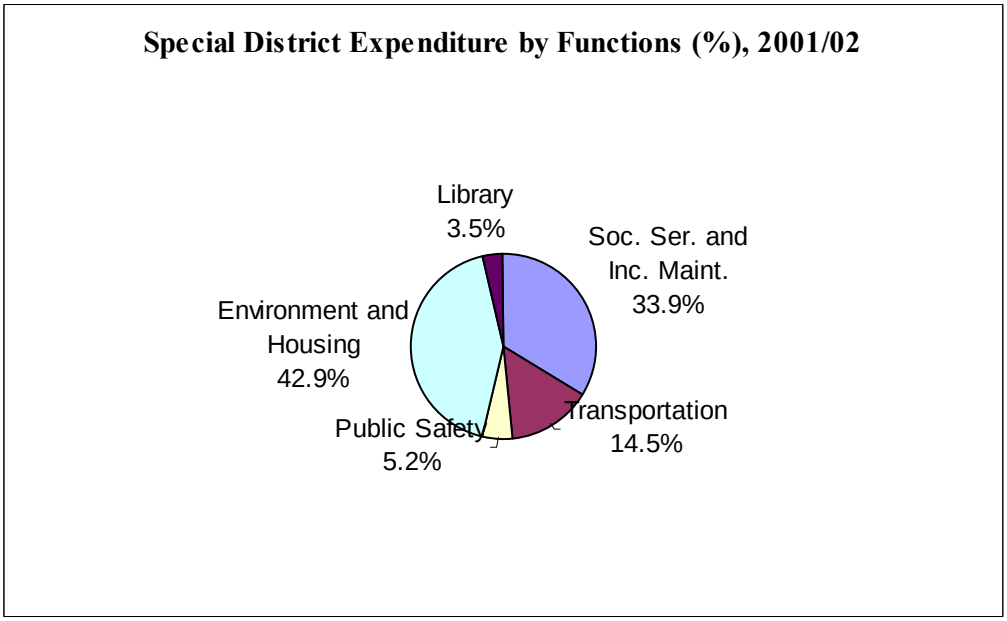

Figure 3-6: Proportion of Special District Expenditure by Functions, 2001-2002

The figures above show functions performed by special districts. By comparing the proportions of special district to total area, county to total area, and municipal to total area expenditures to each other, a remarkable distinction can be seen in that the highest proportion of special district expenditure is in environment and housing as well as high proportion in social service and income maintenance (See Appendix Table A-6, special district column for details). The most change has occurred in library, transportation, and public safety functions with more than 100% increase during 1991/92 and 2001/02 (See Appendix Table A-6, special district column for details).

3.4.1 Division of Labor Between Local Governments

Emile Durkheim (1933) states that a "division of labor" increases productive capacity and skill, and is a necessary condition for development in societies because specialization decreases competition, enabling individuals to live together in larger communities. Division of labor for public management at the local level is of course performed by units within a government. It can also be divided among the three types of local governments, but often isn't because there is no institutional structure or strong incentive to do so. It is important to develop a better understanding of the complex set of tasks involved in service provision for jurisdictionally fragmented metropolitan areas. Miller's "Metropolitan Power Diffusion Index," MPDI, is designed to index of fragmentation in metropolitan regions, and in this paper I am using it to examine the division of service contribution by the different types of local governments.

Miller's MPDI is an elaboration of a calculation from Herfindal's approach, from the number of governments and the expenditures of each one. The scale of the MPDI is intended to show that

smaller values indicate more centralization, and the larger numbers show more decentralization in the metropolitan region. The difference between the Herfindal and MPDI methods is in the weighting of the levels of service contribution from the governments. Herfindal's method is the square of the percentage of each government's expenditure of the total expenditure within a region. The MPDI uses the square root of the percentage contribution of each government's expenditure of the total area expenditure, so it is more sensitive to the smaller units of government (Paytas, 2001).

3.5 SUMMARY

The three types of local government share responsibility to deliver services to the citizens, but their history, jurisdiction, revenue and expenditures, and relationship to the state government are different. Taken as a whole, only the state administration services provided by counties can be identified with one type of government, all other services may be provided by any local government type.

County governments take a large role within the network of intergovernmental relationships for service provision. The county works to improve agricultural practices, and environment problems, and to expand partnerships with state and federal government. Locally, county governments serve as a partner to local units of government, a service participant from the legal and fiscal arm of the state in dealing with townships and special district, as a participant in voluntary regional conferences, and an arbiter in disputes among municipal governments or special districts with regional impact.

Over the last half century, there has been a movement away from structural regionalism by establishment of regional governance structure such as annexation, consolidation or metropolitan council in some metropolitan areas. Currently, regional service provision has been an important aspect to manage fiscal stress and promote equity. Administrative regionalism has been adopted by some metropolitan areas such as in New Jersey. Administrative and fiscal regionalism enable governments to close the gap of area wide service provision by creating a regional service organization.

Property tax generation for both counties and municipalities has declined over the century, while there has been increasing rate of property tax generation in special district, indicating increasing importance of special districts in service provision. During 1991/92-2001/02, although proportion of functions has remained steady for municipalities, there has been a fluctuation in levels of service functions for both counties and special districts.

4.0 BUDGETS AND EXPENDITURE GROWTH CONTROL

In the previous chapter, the structure of local governments and trends of revenue and expenditure were discussed. In this chapter, issues concerning budgeting and public management will be addressed to show how management of expenditures might indicate other positive governance traits.

Service expenditures are a process which begins with budgeting. The major role of budgeting is to plan for the allocation of resources for public service provision based on implied importance or priority. However, most budget differs only incrementally[1] from previous budgets, a practice which promotes stability and predictability. Shafritz and Russell (2000: p. 442) state that budgeting is the single most important decision-making process in public institutions. Budgets simultaneously record policy decision outcomes, cite policy priorities and program objectives, and delineate a government's total service effort.

[1] "Incrementalism" is Lindblom's (1959) term for a style of public policy that changes in incremental ways, and which, over time, approaches effective and equitable policy. Lindblom observed that many decision makers started with the issue and the history of previous policies, then made a choice between minor alternative changes to the current policy. In practice the incremental method allows policy makers to disregard completely impractical alternatives, and encourages feedback, frequent re-evaluation, and further incremental policy adjustments.

The budgetary process reinforces this tendency because the year-on-year budgets are most often based on previous years (Jones, Baumgartner, and True, 1998).

4.1 BUDGET MAXIMIZATION, FISCAL CONTROL, AND ROLE OF PUBLIC MANAGERS

The behavior of budget maximization stems from bureaucrats' attempt to increase their budget for their utility, such as salary, seniority, and promotion (Niskanen's, 1974). According to Lynn (1991), bureaucrats seek larger discretionary budgets and public managers are not goal or output oriented. Given this situation, it appears that spending faces many pressures to continually increase. It is assumed that citizen demand for services is at least constant, so in order to improve service delivery performance, it is necessary to limit expenditures. Aucoin states that bureaucracies have not been influential at promoting budgetary restraint (1991). Since the natural inclination is for budgets to increase, control of the increase can be attributed to professionalism and managerial competence.

4.2 REFORM MOVEMENT AND PERFORMANCE: EFFECTIVE COST CONTROL

American public administration is largely influenced by the systematic management of government, Germany's Cameralism, which came to prominence in the U.S. with Woodrow Wilson's "The Study of Administration," in 1887 (Heady, 1996). Since then, a sharp dichotomy between politics and administration made by Frank J. Goodnow (1893) and Leonard D. White (1955) has been prevalent in public administration to preserve administrative neutrality (Shafritz and Russell, 2000; Kemp, 2002). In later years, adoption of scientific management contributed to rational management in public administration[2] (Merkle, 1980). Likewise, Max Weber's ideal

[2] Scientific management has contributed in three ways: 1) the idea of public efficiency became the core of a political program to solve social and economic distribution; 2) scientific management entered a powerful alliance with the

type bureaucracy[3] had a similar effect for improving executive function (Gerth and Mills, 1946). These features are more likely to be found in council-elected executive or council-manager forms of government rather than commission governments.

Along with the incentive for public managers to limit expenditures for their professional interest in their government, there is also a personal incentive to do so. "City managers are highly mobile and participate in a highly competitive labor market. A history of cost-efficient management should enhance the individual's market value. Although such an incentive may operate for elected officials in terms of electability, limited mobility and electoral politics are likely to reduce its importance severely" (Ferris, 1986: p. 294).

Council-manager and council-elected executive forms of government are perceived as reformed government (Snider, 1957; DeSantis and Renner, 1994), and thus more professional. "Reform agencies are more likely to routinize their program operation, adapt to redistributive program missions, and in the end, develop a modus vivendi that supports the redistributive goals. Under these circumstances, policy stability tends to prevail" (Wong, 1988: p. 9). It is assumed the metropolitan counties with the best expenditure management performance exhibit *professionalism* and *accountability.* These characteristics are related to effectiveness because of expert knowledge, merit-based decision-making, and transparency.

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progressive movement as it became the substance of doctrine of government reform; and 3) it played an important role in the campaign of the civil service reformers to define "administrative" problems as separate from political ones. Hence impartial administration systems could be run scientifically for the benefit of society as a whole, for example, merit principles of staffing over patronage.

[3] German sociologist Max Weber defined bureaucracy to be hierarchical organizations that function to carry out policies. The common usage of bureaucracy in a government implies 1) division of labor; 2) hierarchy; 3) written documentation; 4) staff of trained experts; 5) full working capacity of the official; and 6) general rules.

4.2.1 Professionalism

In the modern progressive era, better performance is based largely on expert knowledge which implies that institutions recruit professionals. Professionals can distinguish office from home affairs, hence promote accountable organizational bureaucracy. An early definition of professionalism in bureaucracy stems from sociologist Max Weber's (1946) writing in which he states that a professionally trained administrator is recruited on the basis of individual merit instead of a traditional system where officials gain and retain their positions by virtue of birth or political sponsorship. A professional is "a member of an occupation requiring specialized knowledge that can be gained only after intensive preparation. Professional occupations tend to possess three features; a body of academic and practical knowledge that is applied to the service of society, a standard of success theoretically measured by serving the needs of society rather than seeking purely personal gain, and a system of control over the professional practice" (Shafritz and Russell, 2000).

To promote the practice of performance in the United States, the federal government created the Civil Service Commission in 1883 to separate federal recruitment from politics. The role of public managers has been defined formally and in the public consciousness as an objective professional removed from policy or politics, focusing on administrative processes such as efficiency (Wilson, 1887; Ammons and King, 1983; Pammer, 1990). In "The principle of public administration," Woodrow Wilson (1887: p. 197) states that administration "… is the object of administrative study to discover, first, what government can properly and successfully do, and secondly, how it can do these proper things with the utmost possible efficiency and at the least possible cost of either money or of energy." Application of expert knowledge in metropolitan

governance facilitates an increase in administrative capacity and effective process of policy choice because policy choice is likely to be based more on professional criteria rather than the competing demands of interest groups or elected officials (Pammer, 1990).

"A jurisdiction's merit system, if it has one, consists of all those members of the civil service who are selected by a formally established merit process" (Shafritz and Russell, 2000: p. 372). State and local government began to institute civil service commission influenced by the Pendleton Act of 1883. According to Shafritz and Russell (2000), by 1999 less than 10 percent of county governments had adopted a merit system. One factor contributing to the adoption of new forms of government is recruitment or appointment to governance of professional personnel. "Professional control over public resources are reinforced by the merit system in personnel promotion and recruitment, task routinization, and shared professional identification with the organizational mission. Professionalization of local administration has been fostered by both the local reform movement and the proliferation of federal programmatic guidance" (Wong, 1988: p. 9).

4.2.2 Accountability

For effective management, performance should be evaluated within the context of the New Public Management. According to Barzelay (2001), The New Public Management (NPM)[4] is a

[3] The New Public Management is defined as: 1) It refers to distinctive themes, styles, and patterns of public service management in the U.K., Australia, and New Zealand which appeared in the early 1990s. These (NPM) ideas about management spread rapidly to other countries; 2) It is a valid framework for making decision about how to structure and manage public service, which is based on a theoretical idea about organization and management that is from a mainstream position in economics and political science; 3) It is an empirical style of organizing public services,

multidisciplinary technical approach which addresses both feasibility and desirability in terms of how public management should be conducted and coordinated through expenditure, planning and financial management, civil service and labor relations, audit and evaluation. New Public Management recognizes the relationship between the effectiveness of the management strategy and the need for democratic accountability. In the current complex environment with multiple clients and interest, accountability can be most effectively accomplished when the controlling instruments of performance measurement are directly linked to service providers as responsibility centers, and the public managers responsible for delivering specific goods and services are known to the citizens.

4.3 INCREASING ROLES OF COUNTY GOVERNMENT

County government is a dominant service provider by level of expenditure as well as level of services in the six functions described in Figures 3-1 and 3-2. Although the total amount of expenditure and number of service functions of counties are lower than those of municipalities, growth rates for these items are higher for counties (Schneider and Park, 1989; Cigler, 2002; Bureau of Census Financial Data, 2002). County government expenditures are growing faster than all local governments except for special districts (Park, 1996; Government Finances from Census Bureau, 2002). Park (1996) states that metropolitan county governments are growing the fastest among all counties. Identifying the determinants of county government growth could contribute to sound fiscal policy, help policy makers shape the future of their county; enhance

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exemplified by the construction of quasi-markets in the health and education sectors. Also it encompasses changes in government wide systems of financial management, personnel management, procurement, and auditing.

the ability of county leaders to plan and predict future government growth and respond more effectively to demands for service (Park, 1996).

4.3.1 Performance Measurement

According to Ammons (2001), in order to find effectiveness of government, measurement is needed to evaluate performance. It is a direct and quantitative reinforcement mechanism which enables administrations to align their planning, budgeting, steering, and controlling activities according to output. This should create a situation in which political decision making bodies will no longer debate itemized budgets, but planned and actual performance (Shafritz, 1998: p. 1638). Governments need to develop a benchmark, or a standard level of performance (i.e., outcome) with which to judge their service program.

An analysis of performance measurement to the county service share in single metropolitan counties permits a demonstration of their roles in terms of efficiency, quality, and effectiveness which may ultimately determine their relative share of public services funding. Additionally, the ability of the services to demonstrate their efficiency, quality, and effectiveness may ultimately determine its relative share of public funding relative to other governments.

4.4 SUMMARY

Budgeting and roles of public management interplay for efficient and effective performance in public governance. Performance of expenditure management reflects the outcome of important decision-making processes in public institutions for policy priorities and program objectives.

Professionalism facilitates expansion of administrative capacity and effective response to policy choice based on specialized knowledge criteria over the competing demands of interest groups or elected officials Accountability in a democracy is when performance measurement are directly linked to service providers, which are linked to the public managers responsible, and the citizens can find the performance and the managers. Reformed governments may utilize their professional expertise and establish accountability rules to improve governance.

5.0 SERVICE PROVISION: SINGLE METROPOLITAN COUNTY CASE

For this study I use 66 economically unified, federal government-designated Metropolitan Statistical Areas, with a population over 50,000 that have been single metropolitan counties since the 1970s. This chapter focuses on these small but cohesive single metropolitan counties to explore local government service expenditure and economic-demographic conditions within metropolitan areas. Settlement patterns and other historical or geographic characteristics of the various regions of the United States make the metropolitan areas similar within regions, and the analysis includes some regional comparison.

Single metropolitan counties are situated across all U.S. geographical regions, although there are more in the South and West. Several of these single metropolitan counties are currently consolidated with other metropolitan areas, but they retain an individual MSA designation and there has been no restructuring (i.e. establishment of metropolitan government) in any of the areas.

[Table 5-1]: Mean Number of Local Governments in Single Metropolitan Counties by Region, 1997

Region	No. of MSA	Counties	Municipalities*	Special Districts	Total Gov't
Northeast	8	1	33	33	67
Midwest	16	1	31	25	57
South	21	1	11	17	29
West	21	1	15	62	78
Total (Mean)		1	18	35	54

Source: Government Organization, vol. 1, 1997.
* Includes Cities, Townships

Table 5-1 shows the West region has the largest average number of local governments by having the highest number of special districts. The South region demonstrates the smallest mean number of local governments, in both special districts and municipalities. The Northeast and Midwest have on average the highest number of municipalities, and they are also somewhat balanced between the number of municipalities and special districts. The total number of government units represents levels of decentralization and the larger the average number of local government, in general the larger fiscal decentralization. According to Nelson (1990), "greater fiscal decentralization should occur when citizen preferences for government services are more heterogeneous." Although the Northeast and Midwest share a similar historical heritage such as close proximity of population settlement and industrialization, the Northeast and West are considered more decentralized or heterogeneous regions than the Midwest and South by the number of local government as well as expenditure dispersion.

5.1 LIFE-CYCLE OF SINGLE METROPOLITAN COUNTIES

As the United States regions were settled at different times, the counties are at different stages in the life-cycle regionally, and there are geographic and population density differences also. For example, the Northeast and the Midwest settlement began with towns or townships and expanded to cities and municipalities starting in the early 1600s (i.e. the MSA for Poughkeepsie NY). The South and West established cities but do not have townships, and their counties were established relatively later than other regions, except for a few such as Fayetteville NC MSA (Governmental Organization, 1972-1997; also County Websites). One differences in the older manufacturing-centered Northeast and Midwest "rust belt," and the booming "sun belt" South and West regions are the ages of the counties.

[Table 5-2]: Life-Cycle of Single Metropolitan Counties by Region

Region	No. of MSA	Towns and Township, 1997[1]	Mean Age of County, 2000[2,]	Central City Pop to MSA Pop. (%)[3]	% Changes of Manufacturing Sector Employment 1969-2000*	% Changes of Agricultural Sector Employment, 1969-2000*
Northeast	8	20	222	27.7	-36.9	168.7
Midwest	16	19	167	54.3	28.2	227.5
South	21	0	151	48.7	63.7	111.9
West	21	0	135	44.0	111.4	94.5
Total (Mean)		18.4	158	46.0	58.1	141.2

Sources:
1) Government Organization, vol. 1, 1997.
2) County websites.
3) City population is from County and City Extra, 2002; metropolitan population is from BEA website.
* Calculated from BEA website data.

The mean age shows that the Northeast and the Midwest single metropolitan counties are older than those of other regions. The proportion of city population in the Northeast exhibits the lowest rate compared to other regions, following the life cycle of urban decay from exhaustion of natural resources and manufacturing sector plant closings which created population decline. Although the average age of counties in the Midwest is older than the South and West, the proportion of central city to metropolitan population is the largest (highest city population concentration) due to conservation of agricultural land (County and City Extra, 2002; National Geography Reference, 2003). Although the declining manufacturing sector employment in the Northeast and Midwest is well understood based on the urban life cycle, the increasing agricultural sector employment in these regions is interesting since they have usually been known for their manufacturing prowess.

5.2 DEMOGRAPHY

Demographic conditions vary across regions for single metropolitan counties. Northeast metropolitan areas maintain the highest density with "hollowing out" central city population. Land scale demonstrates the largest land size MSAs with the most population are in the West region.

Between 1970 and 2000, population change in the single metropolitan counties increased faster than that of the U.S. total population, averaging nearly 60% population increase.

[Table 5-3]: Population and Change in Single Metropolitan Counties by Region, 1970-2000

	Population			Land Size (Sq. Km.)	Density
Region	1970	2000	Change (%)	2000	2000
Northeast	284,432	330,076	16.8	1,521	809
Midwest	148,484	187,953	25.5	1,735	122
South	166,773	332,029	76.0	2,830	123
West	709,222	1,162,324	84.6	8,168	204
Total (Mean)	349,198	561,049	59.3	4,104	232

Sources: Census Bureau and County and City Extra, 2002.

Demographic changes and number of governments differ regionally as well. Although population increases can be seen throughout the regions in Table 5-3, most changes have occurred in the South and the West regions and the least change can be seen in the Northeast.

In 2000, the largest population in the West region is more than three times the size of other regions, while the Midwest has the smallest population. The Northeast experiences remarkably higher density than other regions. The Midwest and South experience lower density than other regions.

The number of governments varies with population, land size, and density measurements. The relationship of numbers of governments to these three variables are shown below.

[Table 5-4]: Correlation Matrix of Number of Governments[1] with Demography in Single Metropolitan Counties

Demography[2]	No. of Governments, 1972	No. of Governments, 1997
Population	0.409**	0.717**
Land Size Sq Km	0.113	0.241*
Density	0.014	0.052
Ratio of Central City Pop. to Total Metro. Pop.	-0.517**	-0.355**

1. Includes county, cities, townships, and special districts.
2. Used 1970 and 2000 data.
* Correlation is significant at the 0.1 level.
** Correlation is significant at the 0.01 level.

There is a significant relationship between the number of governments and population for both study periods. The zero order correlation is 0.409 in 1972 and 0.717 in 1997, respectively, with significance level at 0.01. However there is no distinguishable relationship between number of governments and land size at significance level less than 0.05, nor between number of governments and density. Population concentration in the central cities has a negative relationship with the number of local governments, with significant correlation at -0.517 in 1972 and –0.355 in 1997.

5.3 FISCAL CONDITION AND GOVERNANCE

The role of governments involve three major areas: stability and growth, redistribution, and allocation (Musgrave and Musgrave, 1985 in Mikesell, 1995). Peterson (1981) developed three types of public policies for economic well-being, recognizing that local public policies are different, depending on their impact on the economic vitality of the community. First,

developmental policy, which enhances the economic position of the community because there are greater positive benefits to costs ratio in areas of land values and higher local governmental revenues. Second, redistributive policy, which provides benefits to low-income residents but at the same time these residents negatively affect the local economy. Third, allocational policy, which is more or less neutral in its economic effects because marginal expenditures have neither much of a positive nor negative effect on the local economy.

On the whole, all members of the community benefit from the most valued aspects of services; policies. Peterson (1981) states that there are three factors that affect public policies: 1) fiscal capacity which affects its level of expenditure because relatively higher local tax rates make a community relatively less attractive. To protect a community's economic resources from net outward flow, tax rates must not be significantly greater in any one community than they are in competing areas; 2) the cost of supplying the service which affects level of expenditure; and 3) the demand for the service which affects expenditure.

[Table 5-5]: Peterson's Determinants of Local Government Expenditure

Type of Policy	**Fiscal Capacity**	**Demand**	**Supply**
Redistributive	High		Low
Allocational	Moderate	Moderate	Moderate
Developmental	Low	High	Moderate

Source: "City Limits" (Peterson, 1981: p. 48).

In order to better understand and facilitate these three factors that affect expenditure, I explore two features. One is revenue raising effort of local government in which community's wealth (income) can represent the level of demand and supply for service provision. Another is share of

service responsibility between local government types. An understanding can be developed of how service provisions are structured in the metropolitan areas as well as local governments' expenditure based on governance structure.

5.3.1 Revenue Raising Effort

Ladd and Yinger (1989) measured city's revenue raising effort with the principle source of revenue being resident income. This is because income represents individual taxpayers' ability to pay, and all taxes are paid from resident's income. All counties depend mostly on local property tax, and property tax is the most stable local own revenue source for service provision (Oates, 2001). In this paper I use property tax as the revenue source for the metropolitan areas.

Property tax benefits service provision within the jurisdictional boundary (Musgrave in Oats, 2001: p. 342). However it is not a favorable revenue source, as there have been many incidents of residents' property tax revolts (Chicoine and Waltzer, 1985: p. 94; Ladd and Yinger, 1989; Burns, 1994), and state mandates on property tax limit. Examples are California's Proposition 13 and Massachusetts Proposition 2½. As shown in the figures and correlation relationship in Table 5-6 and Table 5-7, property tax generation has declined across the regions over the past two and half decades.

[Table 5-6]: Correlation of Per Capita Income[1], Per Capita Property Tax[2], and Property Tax Generating Effort, 1970 and 2000

	1970			2000		
	Per Capita Income	Per Capita Property Tax	Property Tax Generating Effort	Per Capita Income	Per Capita Property Tax	Property Tax Generating Effort
Per Capita Income	1.000	0.753**	0.486**	1.000	0.549**	0.039
Per Capita Property Tax	0.753**	1.000	0.933**	0.549**	1.000	0.833**
Property Tax Gen. Effort	0.486**	0.933	1.000	0.039	0.833**	1.000

1 Used 1970 and 2000 figures.
2 Used 1972 and 1997 figures.
** Correlation is significant at the 0.01 level.

[Table 5-7]: Property Tax Generating Effort and Change by Region, 1970-2000

Region	Per Capita Income			Per Capita Property Tax			Property Tax Generating Effort		
	1970	2000	% Change 1970-2000	1970	2000	% Change 1970-2000	1970	2000	% Change 1970-2000
Northeast	4,129	28,632	589.6	199	962	389.9	0.048	0.033	-29.3
Midwest	3,974	28,342	614.7	217	804	276.9	0.054	0.028	-47.0
South	3,210	23,247	621.8	111	554	398.3	0.034	0.024	-30.5
West	4,194	29,370	597.8	247	582	156.6	0.058	0.020	-62.9
Total (Mean)	3,820	27,083	608.5	191	673	290.9	0.048	0.025	-44.7

The change in per capita income in the Northeast is the smallest compared to other regions, and yet the percentage change in per capita property tax is relatively higher than the regional mean

figure. This indicates they retain an ability to generate property tax revenue more than other regions.

5.4 SERVICE SHARES IN LOCAL GOVERNMENTS AND LOCAL FISCAL CONDITION

In this section, the relationship between public service expenditure and shares of service responsibility by each type of local government will be explored. To quantify the service share, I use the MPDI calculation but convert the MDPI values for each type of local government into percentages of "responsibility share" of service contribution for each of the three types of local government in each region.

According to correlations in Table 5-8, the share of service responsibility relationship between special districts and municipalities is the most sensitive with negative correlation at -0.813. The relationship between special district and county is also somewhat negatively sensitive with correlation at -0.385.

[Table 5-8]: Correlation of Service Responsibility Shares among Local Governments in Single Metropolitan Counties, 1992

	County	**Municipality**	**Special District[1]**
County	1.000	-0.196	-0.385*
Municipality	-0.196	1.000	-0.813**
Special District	-0.385*	-0.813**	1.000

1. Includes 65 observations.
* Correlation is significant at the 0.05 level.
** Correlation is significant at the 0.01 level.

[Table 5-9]: Share of Service Responsibility and Percentage Change by Local Governments in Single Metropolitan Counties, 1972-1992

Region	No.	Share of Service Responsibility , 1992			Percentage Change 1972-1992		
		County	Municipality	Special District	County	Municipality	Special District*
Northeast	8	14.7	64.6	20.7	6.3	-11.1	74.2
Midwest**	16	19.2	64.1	16.7	-9.8	-7.0	333.1
South	21	23.0	56.0	22.0	6.5	-6.6	164.1
West	21	20.6	43.4	36.0	-10.2	-9.7	71.8
Total (Mean)		20.3	55.0	25.1	-2.8	-8.2	164.8

Source: Calculated from MPDI.
* Based on 65 observations (excludes Monroe, LA)
** Computed for Racine, WI and Kenosha, WI from 1977 to 1992 data

Geographically, the Northeast illustrates the largest share of service responsibility for municipalities, and the smallest county share of service responsibility. The Midwest has the second highest municipality share, and the smallest share for special districts. The counties in the South have the most share of service responsibility compared to county shares of other regions, and the second highest special district share. This is consistent with the incorporated power and responsibility of municipalities in the Northeast and Midwest, and the importance of counties in the South. The trend is an interesting pattern. County share of service responsibility has risen in both the Northeast and South, but it has decreased in the Midwest and West. While the municipality share of responsibility has declined through all regions, special district share of responsibility has risen remarkably across all regions.

The trend of an increasing special district role throughout the regions reflects scholarly observation and discussion of public governance in responding to demographic conditions with its changes in socio-economic and political environment (Burns, 1994; Foster,1997b; Ladd, 1998; Stephens and Wikstrom, 2000).

[Table 5-10]: Correlations between Service Shares and Demographic Conditions in Single Metropolitan Counties, 2000

Service Share	Total Population	Land Size Sq. Km.	Density	Central City Pop. to Total MSA Pop. (%)
County	-0.235	0.129	-0.135	0.528**
Municipality	0.007	-0.522**	0.189	-0.184
Special District	0.128	0.403**	-0.103	-0.162

** Correlation is significant at the 0.01 level.

Some researchers state that there are greater opportunities for the use of special districts in areas that are less densely populated (Chicoine and Walzer, 1985: p. 11 and 77-81; Nelson, 1990). However Table 5-8 demonstrates that special district use is associated negatively with the service share of municipalities. That is when the metropolitan areas have a large proportion of municipalities providing public services, the use of special districts is not as great as those metropolitan county areas with less proportion of municipal service share. Nelson states that creation of new municipalities is difficult within large, well-established, cities (1990: p. 455).

A notable factor from Table 5-10 is that as metropolitan areas maintain large populations in the central city, the county share of service responsibility has a positive correlation with percentage of central city population to total metropolitan population, at 0.528. Another distinguishable

factor is the relationship between land size and special districts; as land size increases, the special district share of service responsibility is positively related with correlation at 0.403.

Furthermore, some scholars hold that "special districts may be created to circumvent state-imposed limits on local property tax rates and debt" (Chicoine and Walzer, 1985), and to cope with the inability of local governments to raise revenue and the rising cost of proving public services. Nelson (1990) found there is little evidence that debt limitation is associated with local government growth in the metropolitan areas. Also limiting effect of debt on public expenditure is difficult to identify due to institutional information oversight and monopoly power on information as well as federal governments de facto tax subsidy to municipalities by not taxing municipal bonds (Mikesell, 1995). To provide a surrogate for the effect of levels of local governments' service provision on expenditure, I correlate property tax information.

[Table 5-11]: Correlations between Service Shares and Fiscal Conditions in Single Metropolitan Counties, 1997

Service Share	**Per Capita Property Tax**
County	-0.262*
Municipality	0.332**
Special District[1]	-0.188

1. Based on 65 observations.
* Correlation is significant at the 0.05 level.
** Correlation is significant at the 0.01 level.

Table 5-11 demonstrates there is a significant positive correlation between municipality service share and per capita property tax generation. Special district use is negatively correlated with per capita property tax generation. Also there is a negative relationship between county service share and per capita property tax generation. It may be that county governments have less ability

to generate property tax revenue to meet service needs, hence the single metropolitan counties with large proportion of county share are likely to rely on other sources of revenue or alternative mechanism such as special districts, which are largely financed through user fees.

Table 5-12 and 5-13 are correlation matrices to demonstrate the relationship among study areas in demography, number of local governments, property tax generating effort, and local governments' service shares during 1970-2000.

[Table 5-12]: Correlations for Per Capita Expenditure with Demography, Number of Local Governments, Property Tax Generating Effort, and Service Shares of Local Governments, 1970

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.343**	.416**	.174	.327**	.783**	-.019	-.476**	.488**
	Sig. (2-tailed)	.	.005	.001	.162	.007	.000	.881	.000	.000
	N	66	66	66	66	66	66	66	66	66
MSA Pop., 1970	Pearson Correlation	.343**	1	.211	.180	.409**	.209	-.213	.011	.115
	Sig. (2-tailed)	.005	.	.088	.149	.001	.092	.086	.929	.358
	N	66	66	66	66	66	66	66	66	66
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.416**	.211	1	-.143	.113	.257*	.277*	-.482**	.319**
	Sig. (2-tailed)	.001	.088	.	.252	.366	.038	.025	.000	.009
	N	66	66	66	66	66	66	66	66	66
MSA Density, 1970	Pearson Correlation	.174	.180	-.143	1	.014	.156	-.149	.076	.013
	Sig. (2-tailed)	.162	.149	.252	.	.913	.212	.232	.546	.921
	N	66	66	66	66	66	66	66	66	66
Total No. of Gov't, 1972	Pearson Correlation	.327**	.409**	.113	.014	1	.191	-.615**	-.067	.431**
	Sig. (2-tailed)	.007	.001	.366	.913	.	.124	.000	.595	.000
	N	66	66	66	66	66	66	66	66	66
Property Tax Generating Effort, 1970	Pearson Correlation	.783**	.209	.257*	.156	.191	1	-.001	-.281*	.282*
	Sig. (2-tailed)	.000	.092	.038	.212	.124	.	.996	.022	.022
	N	66	66	66	66	66	66	66	66	66
County Service Share, 1972 (%)	Pearson Correlation	-.019	-.213	.277*	-.149	-.615**	-.001	1	-.298*	-.294*
	Sig. (2-tailed)	.881	.086	.025	.232	.000	.996	.	.015	.017
	N	66	66	66	66	66	66	66	66	66
Municipal Service Share, 1972 (%)	Pearson Correlation	-.476**	.011	-.482**	.076	-.067	-.281*	-.298*	1	-.825**
	Sig. (2-tailed)	.000	.929	.000	.546	.595	.022	.015	.	.000
	N	66	66	66	66	66	66	66	66	66
Special District Service Share, 1972 (%)	Pearson Correlation	.488**	.115	.319**	.013	.431**	.282*	-.294*	-.825**	1
	Sig. (2-tailed)	.000	.358	.009	.921	.000	.022	.017	.000	.
	N	66	66	66	66	66	66	66	66	66

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

[Table 5-13]: Correlations for Per Capita Expenditure with Demography, Number of Local Governments, Property Tax Generating Effort, and Service Shares of Local Governments, 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.335**	.258*	.162	.306*	.297*	-.118	-.198	.235
	Sig. (2-tailed)	.	.006	.037	.194	.012	.015	.344	.111	.060
	N	66	66	66	66	66	66	66	66	65
MSA Pop., 2000	Pearson Correlation	.335**	1	.261*	.230	.717**	-.117	-.235	.007	.128
	Sig. (2-tailed)	.006	.	.034	.063	.000	.351	.058	.959	.310
	N	66	66	66	66	66	66	66	66	65
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.258*	.261*	1	-.140	.241	-.106	.129	-.522**	.403**
	Sig. (2-tailed)	.037	.034	.	.261	.051	.396	.303	.000	.001
	N	66	66	66	66	66	66	66	66	65
MSA Density, 2000	Pearson Correlation	.162	.230	-.140	1	.052	.233	-.135	.189	-.103
	Sig. (2-tailed)	.194	.063	.261	.	.680	.059	.279	.129	.414
	N	66	66	66	66	66	66	66	66	65
Total No. of Gov't, 1997	Pearson Correlation	.306*	.717**	.241	.052	1	.002	-.563**	-.057	.371**
	Sig. (2-tailed)	.012	.000	.051	.680	.	.984	.000	.649	.002
	N	66	66	66	66	66	66	66	66	65
Property Tax Generating Effort, 2000	Pearson Correlation	.297*	-.117	-.106	.233	.002	1	-.213	.336**	-.223
	Sig. (2-tailed)	.015	.351	.396	.059	.984	.	.086	.006	.074
	N	66	66	66	66	66	66	66	66	65
County Service Share, 1992 (%)	Pearson Correlation	-.118	-.235	.129	-.135	-.563**	-.213	1	-.196	-.385**
	Sig. (2-tailed)	.344	.058	.303	.279	.000	.086	.	.115	.002
	N	66	66	66	66	66	66	66	66	65
Municipal Service Share, 1992 (%)	Pearson Correlation	-.198	.007	-.522**	.189	-.057	.336**	-.196	1	-.813**
	Sig. (2-tailed)	.111	.959	.000	.129	.649	.006	.115	.	.000
	N	66	66	66	66	66	66	66	66	65
Special District Service Share, 1992 (%)	Pearson Correlation	.235	.128	.403**	-.103	.371**	-.223	-.385**	-.813**	1
	Sig. (2-tailed)	.060	.310	.001	.414	.002	.074	.002	.000	.
	N	65	65	65	65	65	65	65	65	65

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

For the period between 1970 and 2000, there are significant relationships between per capita expenditure and demographic conditions for population and land size, and also between the number of governments and expenditures. Property tax generating effort and special district service share exhibit significant relationships with expenditure, by at least 0.1 level for both periods.

There are two parts to this finding of a relationship between property tax generating effort and service share of local government types; a proportional spending pattern between special district and county service share, and a disproportional spending pattern between special district and municipal service share. Furthermore, the special district service share relationship with counties is apparent only in 2000, but the municipal relationship holds for both time periods.

First, for the special district and municipal relationship, there appears to be a pendulum-like effect between expenditures by municipalities and special districts, as municipal governments tend to sponsor special districts in response to economic development or fiscal stress when property tax effort declines in response to political pressure. The effect is to transfer the spending from one type of government to the other. When special districts are no longer needed they are disbanded, thus moving the expenditures back to municipal governments, or if the service is no longer needed, the expenditure is no longer part of the special district service share. This finding provides some statistical evidence for this effect in part, which has been discussed for the special district usage for development and fiscal stress (Burns, 1994; Ladd, 1998; MacManus, 1981).

Second, the relationship between metropolitan area (county) property tax generating effort and county and special district service share is similar. County expenditures rise in response to economic development or fiscal stress as counties provide additional services in unincorporated areas, and likewise sponsor special districts in these areas in response to political pressures. Overall spending for counties rises for services already provided by the county for the region, resulting in a proportional spending service share between counties and special districts. This

exists in the year 2000 but not 1970, more likely because suburban expansion in unincorporated areas was not as present in 1970 as it was several decades later.

The positive correlation between the four explanatory variables and expenditure suggests generally that the metropolitan areas with larger population, land size, density, and number of governments have more service responsibility per capita in the case of single metropolitan counties. Also, property tax generating effort and special district service share have a positive relationship with per capita expenditure. I employ these variables to examine changes in expenditure for forms of county government and for types of local governments in the single metropolitan counties. This result will be discussed in Chapter 7.

5.5 SERVICE PROVISION AND GOVERNANCE STRUCTURE

The forms of government in counties and municipalities are somewhat similar. The traditional form of government is the commission for both counties and townships, and the changes from this form to a single executive (county executive or mayor) or professional county or municipal manager, between the 1970s and 2002 are also similar.

During the period 1974-2002, nearly 25% of single metropolitan counties changed government form (Municipal Year Book 1975 and 2003). Most changes have occurred in the Northeast region followed by the Midwest, with the least change in the South, followed by the West.

Municipal central city government structures have also changed during 1971-2002. By regional mean measure, 15.5% of central city governments have changed their form of government. Most

changes have occurred in the Northeast and the South regions. Table 5-14 illustrates the changes.

[Table 5-14]: Percentage of Forms of County and Central City Government in 2002 and Governmental Structure Change in Single Metropolitan Counties by Region

	County					Central City[1]				
Region	**No**	Council -Elected Exec.	Council -Mgr	Comm	% Change, 1970s-2002	**No**	Mayor-Council	Council-Mgr	Comm	% Change, 1970s-2002
Northeast	8	75.0	0.0	25.0	37.5	7	87.5	12.5	0.0	28.6
Midwest	16	43.8	12.5	43.8	31.2	15	50.0	43.8	6.3	6.7
South	21	14.3	9.5	76.2	14.3	18	23.8	66.7	9.5	22.2
West	21	14.3	61.9	23.8	23.8	18	9.5	90.5	0.0	11.1
Mean (%)		28.8	25.8	45.5	24.2		33.3	62.1	4.5	15.5

Sources: The County Year Book, 1975 and The Municipal Year Book, 1979 and 2003.
1. Used 58 observations for municipality.

The columns showing structural change in Table 5-14 are for any change in government form by 2002. The most changes are from the commission form of government to an elected executive for counties, at over 81%. Within the changes of forms of central city form of governments between 1970s and 2002, the most change is adoption of mayor-council form of city government at over 55%.

[Table 5-15]: Shares of Service Responsibility[1] by Form of County Government[2] in Single Metropolitan Counties by Region

	Council-manager			Council-elected Executive			Commission		
Region	County	Muni	SD	County	Muni	SD	County	Muni	SD
Northeast	n/a	n/a	n/a	15.6	65.3	19.1	12.2	62.5	25.3
Midwest	17.3	66.1	16.6	19.7	68.4	11.9	19.2	59.3	21.5
South	12.2	65.1	22.8	36.4	58.9	7.2	21.8	54.4	23.8
West	20.6	42.9	36.5	19.7	35.6	44.7	21.1	49.3	29.6
Total (Mean)	19.2	48.2	32.5	21.0	60.7	19.2	20.5	55.2	24.3

Sources: 1) Miller's MPDI database with author's calculation for year 1992.
2) Municipal Year Book, 2003 for year 2002 county government forms.

Using the mean shares of service responsibility, the county share of service shows remarkable similarity regardless of the form of government. The South stands out, with 36% service share for the counties which are council-elected executives, and 21% share for counties with a commission, which is in contrast to the numbers, because 76% of the southern counties have a commission form of government.

5.6 SUMMARY

This chapter is an exploration of MSA per capita expenditures for service provision and own source of property tax revenue generation, and the share of the services provided by type of local government in single county MSAs.

This selection was made because for this group, there is a regional MSA-level government, the county. Thus there can be an exploration of the relationships between service provision and

government structure, as well as changes in the government structure regionally, by using the county government. In doing so, it lays the groundwork for future MSA studies with multiple-county and consolidated MSAs. There are historical, geographical, and demographic reasons to use regions of the United States to compare MSAs.

The Northeast demonstrates the oldest county governments, with the most number of municipalities and with the lowest percentage of central city to county population. This region has the lowest rate of population increase. And although county government service share has been in decline between 1972 and 1992, positive change of county government service share has occurred in this region, unlike the Midwest and the West. Property tax generating effort is in overall decline, but it remains the highest in the Northeast region in 2000 compared to other regions. The West uses special districts the most, while changes in service share for special district is the highest in the Midwest. In the Northeast, council-elected executive form of government is used the most in 2002. In the 1970s to 2002, change in county government form is the highest in the Northeast.

6.0 METHODOLOGY

In earlier chapters, characteristics of local government structure and issues related to service provision were discussed, including form of government, as well as revenue sources and expenditures for each type of local government. The single metropolitan county case study in Chapter 5 further explored these characteristics in light of the economic-demographic conditions which may be associated with service provision. The concept of service responsibility share was introduced. This chapter explains how these factors are analyzed and prepares for the discussion and hypothesis testing in Chapter 7.

Demographic conditions have long been a primary factor for service expenditure, and for the last several decades, there has been great pressure on public service providers due to increasing demand of services with low cost. Citizen's resistance to property taxation and increasing governmental unit fragmentation are persistent. During the last half century the number of special districts has almost doubled. Apparently this is to separate development from standard government services or to shift costs when general revenue is declining. The public sector is seeking and applying new strategies to cope with these constraints, as the majority of counties use traditional commission form of governmental structure. Some counties have changed governmental structure during the study period.

As described in the introduction, this dissertation is organized with a two stage analysis. The first stage is a study of service provision by way of public expenditure. The influencing factors

that are considered are demography, government fragmentation, fiscal capacity, and proportional share of special district service responsibility for 1970 and 2000. The first stage analysis will facilitate the second stage study for relationships between growth in service expenditure and economic-demographic conditions in two areas: 1) for governmental structure; and 2) when public services are divided into local governments' proportional share of service responsibility.

Studying the single metropolitan county MSAs as a set offers an opportunity to improve understanding of the complexity involved in the metropolitan areas because these MSAs are a single entity. This enables metropolitan as well as county information to be used for a full representation of these MSAs. The table below shows the major elements related to governance, and hypothesized assumptions.

[Table 6-1]: Hypothesized Assumptions and Controlled Variables on Expenditure Performance

Variables	**Assumption**
Demography and Fragmentation	
Population	Positive
Land Size	Positive
Density	Positive/Negative
No. of Local Governments in MSAs	Negative
Revenue Generation	
Property Tax Generating Effort	Positive
Service Share	
County Service Share	Positive
Municipal Service Share	Negative
Special District Service Share	Positive

6.1 RESEARCH QUESTIONS

1. Is governmental structure associated with performance of area-wide expenditure?
2. Does local government's share of service responsibility contribute to area-wide expenditure performance?

6.1.1 Dependent and Independent Variables

[Table 6-2]: Dependent and Independent Variables

First Stage Exploration	Second Stage Exploration
Dependent Variables	Dependent Variables
Per Capita Expenditure for Service Performed for 1970 and 2000	Governmental Structure Reformed: Council-manager Council-elected Executive Unreformed: Commission Governmental Structure Change Change in Share of Service Responsibility by Types of Local Governments County Municipality Special District
Independent Variables	Independent Variables
Population Land Size Density Number of Local Governments (County, municipality, and special district) Property Tax Generating Effort (Ratio of per capita property tax to per capita income) Special District Share of Service Responsibility	Growth of Expenditure (% change between 1970 and 2000) Economic Condition % Change in Services Sector Employment No. of Manufacturing Sector Establishment Demographic Condition Percentage of City Pop. to Total MSA Pop.

6.2 METHOD OF ANALYSIS

This study uses a combined analytical approach of a qualitative and quantitative nature, with a two time-point data analysis in the period 1970-2000. Regression analysis is performed to observe service expenditure growth (percentage change). In order to examine growth in service expenditure for reformed and unreformed metropolitan counties, and for metropolitan counties with more or less use of each type of local government, a grid analysis based on mean values is adopted. Hypothesis will be tested to substantiate mean differences using t-statistics.

6.3 DATA SOURCE

A research study on county governments from the Advisory Commission on Intergovernmental Relations published in 1971 listed single county metropolitan areas. I tracked the single county status into the year 2000 using the County and City Extra, 2002. Over this time, three Metropolitan Statistical Areas experienced changes in their FIPS identification number. In these cases, if an area matched by county name and geographic size in the earlier and later sources, the MSA is included in the study. This data set also includes 15 MSAs that became part of a larger consolidated MSA during the study period. Since the federal government maintained the identifying FIPS number for these urban county MSAs throughout the study period, they must have some cohesive economic activity apart from their inclusion in the consolidated MSA, and so they remain part of the study group for this paper (see Appendix Table A-2). Single metropolitan counties in 1971 with discontinued FIPS numbers in later editions were excluded from the study. The resulting data set is 66 Metropolitan Statistical Areas that remained single counties. Other sources for information are listed in Table 6-3.

[Table 6-3]: Data Sources for Variables

Categories	Data Source	Information
Governance Structure	The County Year Book, 1975 The Municipal Year Book, 1970 and 2003	Governmental Structure for 1970s and 2000s
Demography	BEA from web (*www.bea.gov/bea/regional/data.htm*) Bureau of Census (*www.census.gov*) County and City Data Book, 2002	Population, 1970 Population, 2000 Land Size, 1970 and 2000
Economy	BEA from web (*www.bea.gov/bea/regional/data.htm*) County and City Data Book, 2002	Industry and Employment, 1969-2000 No. of Manufacturing Sector Establishment, 1997
Finance	2002 U.S. Census of Governments, vol. 4, no. 2-4, for Finances of Local Governments	General Revenue and Expenditure
	1972 and 1997 Census of Governments. Vol. 4, Government Finances. No. 5, Compendium of Government Finances.	Federal and State Grants
Property Tax Generating Effort	County and City Data Book, 1977 County and City Extra, 2002	Per Capita Property Tax; Per Capita Expenditure, 1972 and 1997
	BEA for Income Data, 1970 and 2000 (*www.bea.gov/bea/regional/data.htm*)	Per Capita Income, 1970 and 2000
Fragmentation	Governmental Organization, vol. 1; 1977; Government Organization, vol. 1, 1997	Number of Governments for 1972 and 1997
Service Provision of Local Governments	Miller's MPDI Database, 1972-1992	Shares of Service Responsibility between Local Government Types, 1972-1992

All financial values are presented in constant dollars because the focus of the financial aspect of the study is to examine proportional expenditures at a particular point in time, and compare expenditure growth between two points in time. Proportions are unaffected, and the comparative differences between the rates are the same, so conversion to real dollars was not performed.

6.4 OPERATIONALIZATION

1. Property Tax Generating Effort

In the U.S., property tax has long been a primary revenue source for local governments (Bowman, MacManus, and Mikesell, 1992; Cigler, 1996: p. 175), and so it is used in this study. However, differences in assessment values, property tax rate, and other jurisdictional variables make comparisons of property tax revenues less desirable for comparison purposes. Therefore, to operationalize tax generating effort, Ladd and Yinger's (1989) concept that resident income is the principle determinant of revenue-generating capacity is used. Income represents individual taxpayers' ability to pay, because all taxes are paid from resident's income, for example, citizens with higher incomes tend to live in higher-priced homes with higher valuations.

Tax generating effort is a way to describe the availability of the tax. Property tax generating effort is expressed as "ratio of per capita property tax to per capita income." The lower the ratio, the greater the revenue potential of per capita property tax generation in the metropolitan area. Distressed communities tend to have a higher value of the property tax generating effort.

PTGE=PT/Y, where

PTGE=Property tax generating effort

PT=Per capita property tax

Y=Per capita income

2. Share of Service Responsibility

Miller's Metropolitan Power Diffusion Index (MPDI) is computed as a proportional share of overall service contribution for each type of local government.

a. County share of service responsibility: County portion of total MPDI
b. Municipality share of service responsibility: Municipality portion of total MPDI
c. Special district share of service responsibility: Special District portion of total MPDI

The higher the percentage of service responsibility share for a particular government type within a Metropolitan area, the greater is the service provision role for that type of government in the area.

[Table 6-4]: Comparison Between MPDI and Proportional Service Share of Local Government in Metropolitan Areas

	MPDI, 1992				Proportion (%)			
MSA	County	Municipality	Special District	Total	County	Municipality	Special District	% Total
Los Angeles--Long Beach	0.67	3.77	1.61	6.06	11.1	62.2	26.6	100.0

Source: Miller's Metropolitan Power Diffusion Index.

Table 6-4 illustrates the proportional share of service responsibility for the local governments for the Los Angeles–Long Beach MSA. By proportional measurement, it is clear that the municipality share of service responsibility is the largest in this metropolitan area, while special district's role accounts for 26.6% and county's role is 11.1%. The proportional measurement also provides ease of interpretation of the relative use of government types for service provision.

3. Governmental Structure

a. Council-manager 1 = If council-manager form of government;
0 = Not council-manager form of government

b. Council-elected executive: 1 = If council-elected executive form of government;
0 =Not council-elected executive form of government

c. Commission 1 = If commission form of government;
0 = Not commission form of government

4. Governmental Structure Change

a. County governmental structure change: 1 = Changed;
0 = Not changed

6.5 MODEL EQUATIONS AND EXPLANATION

There are three equations for evaluation of service expenditure in metropolitan counties; 1) expenditure performance for 1970 and 2000; 2) growth in expenditure expressed as rate of change or percentage change of predicted values between 1970 and 2000; and 3) percentage change in service share for each type of local government between 1972 and 1992.

Expenditure Performance = f(Pop, Land, Density, NoGovt, TaxEfft, SDSS), where

Expenditure Performance = Single metropolitan county per capita expenditure (SMCtyPer)

Pop = Single metropolitan county population

Land = Single metropolitan county land size

Den = Single metropolitan county density

Gov = Single metropolitan county number of government

TaxEfft = Single metropolitan county property tax generating effort

SDSS = Single metropolitan county special district service share

Estimation of expenditure performance for single metropolitan counties as dependent variable is expressed as;

$$Y = \alpha + \beta_1 Pop + \beta_2 Land + \beta_3 Den + \beta_4 Gov + \beta_5 TaxEfft + \beta_6 SDSS + \varepsilon$$

6.5.1 Models

Model 1

$Yt = \alpha + \beta_1 Pop + \beta_2 Land + \beta_3 Den + \beta_4 Gov + \varepsilon$, where

t = 1970 or 2000

Model 2

$Yt = \alpha + \beta_1 Pop + \beta_2 Land + \beta_3 Den + \beta_4 Gov + \beta_5 TaxEfft + \varepsilon$, where

t = 1970 or 2000

Model 3

$Yt = \alpha + \beta_1 Pop + \beta_2 Land + \beta_3 Den + \beta_4 Gov + \beta_5 TaxEfft + \beta_6 SDSS + \varepsilon$, where

t = 1970 or 2000

6.5.2 Growth in Expenditure

Growth in Expenditure = *f*(Percentage change in predicted values), where

Percentage change in expenditure(1970-2000) =

$$(\hat{Y}_{2000} - \hat{Y}_{1970}) \Big/ \hat{Y}_{1970}$$

6.5.3 Changes in Share of Service Responsibility by Each Type of Local Government

1. Change in County Service Share$_{(1972\text{-}1992)}$ = (CtySS$_{1992}$-CtySS$_{1972}$)/CtySS$_{1972}$, where (CtySS$_{1992}$-CtySS$_{1972}$)/CtySS$_{1972}$ = Percentage change in proportion of county service share between 1972 and 1992
2. Change in Municipal Service Share$_{(1972\text{-}1992)}$ = (MuniSS$_{1992}$-MuniSS$_{1972}$)/MuniSS$_{1972}$, where (MuniSS$_{1992}$-MuniSS$_{1972}$)/MuniSS$_{1972}$ = Percentage change in proportion of municipal service share between 1972 and 1992
3. Change in Special District Service Share$_{(1972\text{-}1992)}$ = (SDSS$_{1992}$-SDSS$_{1972}$)/SDSS$_{1972}$, where (SDSS$_{1992}$-SDSS$_{1972}$)/SDSS$_{1972}$ = Percentage change in proportion of special district service share between 1972 and 1992

7.0 ANALYSIS OF COST CONTROL PERFORMANCE: SINGLE METROPOLITAN COUNTY CASE

The major aim of this chapter is to examine the relationship between growth in service expenditure and economic-demographic conditions for single metropolitan counties. This relationship is explored in two areas. One is comparing counties by reformed or unreformed government, which is done by direct comparison and by comparing the unreformed counties with those metropolitan counties that changed to a reformed government during the study period. The second area is comparing the service provision relationships between expenditure growth and economic-demographic conditions when public services are divided into local governments' proportional share of service responsibility.

Hypothesis testing is performed in order to clarify previous researchers' findings regarding the relationship between service expenditure and governmental structure, and the relationship between service expenditure and use of local governments. By correlating expenditure growth and change in service share for each government type, negative relationships are exhibited between the expenditure growth and changes in both county and municipal service shares. There is a positive relationship between expenditure growth and change in special district service share. The zero order correlation is not meaningful for the county service share finding, while the relationships are noteworthy for both the municipal service share and for special district service share changes (at -0.481 with significance level at 0.01 and 0.255 with significance level at 0.05,

respectively). Since the correlations have a low level, I split the data into two groups for each type of government's service share, Increase and Decrease service share.

The two sample t-test with non-equal variance assumption will be performed using SPSS for all hypothesis testing[5]. The relationships are examined using two-group mean analysis between growth in expenditure and economic-demographic conditions for metropolitan county governmental structure, and for the local governments share of service responsibility. Table 7-1 demonstrates regressed results for expenditure performance for years 1970 and 2000.

[5] The equation used for hypothesis testing is: $T = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\left(s_1^2/n_1\right) + \left(s_2^2/n_2\right)}}$

[Table 7-1] Regression Results of Performance (Per Capita Expenditure for Service Performed) in Single Metropolitan Counties

	1970			2000		
	Beta			Beta		
	Unstand.	Stand.	t-stat	Unstand.	Stand.	t-stat
Model 1						
Population	0.00001957	0.131	1.080	0.00006033	0.139	0.787
Land Size	0.01157	0.392	3.559***	0.02501	0.207	1.671**
Density	0.04345	0.204	1.856**	0.127	0.151	1.218
No. of Gov't	0.832	0.226	1.945**	1.723	0.148	0.874
Intercept	303.575		11.719***	2302.347		19.262***
R^2	0.317			0.170		
F	7.091			3.123		
No. of Observation	66			66		
Model 2						
Population	0.00001256	0.084	1.043	0.0001125	0.260	1.508*
Land Size	0.006601	0.224	2.964***	0.02630	0.218	1.859**
Density	0.01819	0.085	1.152	0.04234	0.050	0.411
No. of Gov't	0.509	0.138	1.779**	0.740	0.064	0.391
Property Tax Gen. Effort	5154.804	0.668	8.869***	21013.784	0.339	2.892***
Intercept	96.376		3.323***	1820.553		9.045***
R^2	0.705			0.271		
F	28.627			4.472		
No. of Observation	66			66		

	1970			2000		
	Beta			Beta		
	Unstand.	Stand.	t-stat	Unstand.	Stand.	t-stat
Model 3						
Population	0.00001806	0.121	1.564*	0.0001651	0.384	2.118**
Land Size	0.004788	0.162	2.177**	0.01439	0.120	0.950
Density	0.01575	0.074	1.053	0.02437	0.029	0.239
No. of Gov't	0.145	0.040	0.486	-1.205	-0.104	-0.573
Property Tax Gen. Effort	4884.694	0.633	8.761***	24734.998	0.398	3.302***
Special District Share	215.350	0.226	2.852***	1061.181	0.267	1.965**
Intercept	92.602		3.374***	1595.740		6.731***
R^2	0.740			0.308		
F	28.047			4.304		
No. of Observations	66			65		

Note: One-tail test
* p-value ≤ 0.10
** p-value ≤ 0.05
*** p-value ≤ 0.01

Table 7-1 shows regressed results from demography, fragmentation, property tax generating effort, and share of special districts service responsibility. By comparing outcomes from the three models, four major factors become apparent. First, in general, land size is an important explanatory variable over the expenditure growth (using one-tail test with p-value ≤ 0.05) with the exception of Model 3 for 2000. Second, property tax generating effort is statistically important with p-value ≤ 0.01, and increased the explanatory power of Model 2 by R^2 measurement for both 1970 and 2000. A large coefficient value of the property tax generating effort demonstrates that increasing tax generating effort increases the expenditure dramatically. Third, use of special districts has a great impact on expenditure with p-value ≤ 0.05. Finally, for all three models, the intercept has remained statistically meaningful with p-value ≤ 0.01. The positive coefficient value is large also.

7.1 EXPENDITURE AND SERVICE COST CONTROL BY FORM OF COUNTY GOVERNMENT

Kemp (2002) noted that the progressive reform era embraced government reforms to manage rapid urbanization with centralized administrative authority. With these progressive values, American administration desired a separation between policy setting and implementation, with rational calculation for efficient administration, and responsiveness to the popular will (Benton, 2002). According to Sharp (1990), reformed governments result in higher developmental expenditures because they tend to rationalize the business development lobby's effort without a political check on their decisions. On the other hand, the commission form of government is considered to have a lack of professionalism, executive leadership, and accountability (DeSantis, 2002: p. 128; Duncombe, 1966). And unlike professional managers who are mobile, participatory, and cost-effective in a business environment, a commissioner usually is "either born in that county or …. born in the state" (Marando and Thomas, 1977: p. 9). The life-long residency means there is more possibility for cronyism or other forms of patronage in the commission governments. Modern public management is more likely to support pluralism and adopt scientific approaches to resolve tension between pressing social forces and control of industrial society. And centralized control over the budget and personnel (in reformed government but rarely in commission government) results in efficiency (Pammer, 1990: p. 49).

There are differences in research findings regarding the effect of reformed government on expenditures. Some researchers found that reformed government is more prone to respond to socio-economic pressure, tending to lower tax rates and expenditures, provide more and better public service, and more professional administration than unreformed government (Lyons, 1978;

DeSantis and Renner, 1994; Benton, 2002; Lineberry and Fowler, 1967; DeSantis and Renner, 1996). Others contend that government structure does not affect spending differences (Morgan and Kickham, 1999). On the other hand, Schneider and Park (1989) report that reformed county governments spend more than unreformed county governments. The first hypothesis tests this area.

Hypothesis I

$H_{a:}$ Mean of area expenditure growth is smaller with reformed metropolitan counties than the metropolitan counties with unreformed government.

$H_{0:}$ Mean of area expenditure growth is not smaller with reformed metropolitan counties than the metropolitan counties with unreformed government.

Table 7-2 examines expenditure growth using council-manager and council-elected executive as reformed, and commission governments as unreformed government[6]. The table shows that reformed metropolitan counties had smaller expenditure growth than unreformed metropolitan counties.

[Table 7-2]: Mean Growth in Expenditure (% change) for Governmental Structure, 1970-2000: Based on Model 3

Governmental Structure*	No. of Observation	Mean Growth in Expenditure*	Change in Population, 1970 to 2000 (%)	Density, 2000
Reformed	35	507.2	63.0	354.4
Unreformed	30	646.4	56.1	93.6
Total (*Mean)*		571.4	63.0	234.0

Note: 1) Based on 65 observation excluding Monroe, LA.; 2) Used 2002 form of government.
* Difference of mean growth in expenditure is statistically significant at 0.1 level.

[6] The mean comparison with T-test result for Model 3 shows that calculated T-statistic=-3.787 < the critical value of T=-1.282 with df=(65-2), α=0.1, and left tailed test (Table IV from Weiss, 1995).

These results correlate with more economic activity in the reformed metropolitan counties, so it is premature to conclusively state that the reformed governments have controlled service expenditures more than unreformed county governments. Table 7-3 shows the relationship between growth in public service expenditure and economic-demographic conditions for both groups.

[Table 7-3]: Relationship between Mean Growth in Expenditure (% change) and Economic Demographic Conditions for Governmental Structure: Based on Model 3

	Expenditure[1]	**Economy**		**Demography**[2]
Governmental Structure*	Mean Growth	% Change in Service Sector Employment**, 1969-2000	No. of Manufacturing Sector Establishment, 1997	Central City Pop. (%), 2000
Reformed	–	+	+	–
Unreformed	+	–	–	+

* Based on 2002 form of government.
**Service sector employment is combined with FIRE (Finance, Insurance, Real Estate) and service sector.
+ indicates figures are above the mean.
- indicates figures are below the mean.
Notes:
1) (+/-) sign for mean growth in expenditure moves the same direction with percentage change in per capita property tax as well as percentage change in per capita debt.
2) Mean population density and population growth are larger for metropolitan counties with reformed county government.

The metropolitan counties with reformed governments tend to be more urban and with a higher density, but with a smaller proportion of population in the central cities. It is not a surprise to find more economic vitality in the more populous areas, as they are more likely to have a larger labor force and more economic activity. This implies that service cost should be larger because of the cost involved to support these conditions. For example, infrastructure, emergency services, and others should require higher expenditure for greater service needs.

This result, as well as the larger expenditure growth for the unreformed commission county governments, is consistent with earlier discussion (based on Ladd, 1998) on the effect of density on expenditure. Counties with unreformed governmental structure tend to be rural and sparsely populated, with a larger proportion of population residing in their central cities (these single metropolitan areas are not suburbanized). For these areas, citizens' cost for service expenditure appears to be growing. This could be related to increased service needs caused by an increasing population, as shown in Table 7-2 where it can be seen the unreformed county population increased by 56.1%. However, the population increased by 63.0% for the reformed county governments. It appears that the unreformed governments are less capable to control service expenditures given less population growth.

Therefore, the alternative hypothesis is accepted. Expenditure growth in single metropolitan counties with reform governments is less. This may confirm that the reformed governments are more managerially competent.

To explore the differences in metropolitan counties with reformed and unreformed governments further, the relationship between expenditure growth and governmental structure change will be examined in order to better understand the effect of government structure to expenditure growth.

7.1.1 Service Cost Control and County Government Form Change

Morgan and Kickham (1999) claimed that a reform reorganization of governmental structure can be a way of controlling taxes and spending, which may suggest that the lack of integrating policy

leadership or diffused power of multiple officials in a commission form of government is ineffective and inefficient for managing expenditures.

> Contemporary reforms in American counties are promoted to increase professionalism and centralize executive leadership to more effectively control and manage their expanding service-delivery roles. County reformers seek to change political structures to handle an expanding government (Desantis and Renner, 1996: p. 84).

On the other hand, some researchers claim that in a changing demographic environment, unreformed governments tend to spend more as greater resources became available due to their responsiveness to citizens (Pammer,1990: p. 49). If this idea is accepted, then more expenditure growth for the commission government must be judged in a positive light. But however less responsive a reformed government may be, over time and in a democracy, the citizens demands must be heard and met, or else a new government will be formed or elected that can do so. So it is assumed that all government forms are as responsive in the long term. Reformed governments typically embrace the idea of efficiency, sound budgeting practices, and centralized control over the budget and personnel (Pammer, 1990: p. 49). Therefore a result showing greater expenditure for metropolitan counties with commission governments is not a sign of increased response, but possibly an insufficient managerial competency, unsound budgeting practices, or less central control over expenditures and staff.

Of all single metropolitan counties that changed government structure, 93.75% were to a reformed government, either council-manager or council-elected executive government (One metropolitan county government changed to a commission from a reformed government.) This

section focuses on the metropolitan counties that changed from commission to reformed, and those that stayed commission during the study period.

Hypothesis II

H_a: Mean of area expenditure growth with a change in form of county government to reformed from commission is lower than that of single metropolitan with commission form.

H_0: Mean of area expenditure growth with a change in form of county government to reformed from commission is not lower than that of single metropolitan counties with commission form.

The results of the analysis show that the alternative hypothesis appears to be correct. In a similar manner to Table 7-2, Table 7-4 shows that metropolitan counties with reformed government experienced smaller expenditure growth than metropolitan county governments that remained unreformed[7].

[7] The test for two-population mean difference demonstrates that the calculated T-statistic=-1.172 is greater than the critical value of T=-1.282 with df=(38-2), α=0.1, and the left-tailed test (Table IV from Weiss, 1995). This shows that recently changed reformed metropolitan counties have not experienced less expenditure growth than those with traditional government. Information regarding when the change occurred is not available, so it is also possible that not enough time has elapsed to show any difference for the changed governments.

[Table 7-4]: Comparison of Mean Growth in Expenditure (% change) between Metropolitan Counties with Commission Form of Government and Metropolitan Counties with Changed Form to a Reformed Government from Unreformed Commission

Reform Status*	No. of Observation	Mean Growth in Expenditure*	Change in Population, 1970 to 2000 (%)	Density 2000
Changed to Reformed from Commission	9	578.8	23.5	101.4
Unreformed (Remained Commission)	29	646.1	55.6	91.2
Total (Mean)		630.5	48.0	93.6

Note: See Appendix Table A-32 for calculation of t-statistics for hypothesis testing.

* Difference of mean growth in expenditure is not statistically significant at 0.1 level, but close to rejection area.

However, the difference between the (change to) reformed, and the unreformed county governments is about half of the similar difference shown in Table 7-2. Also, the population increased about twice the rate for the unreformed counties than the reformed, which could account for the higher expenditure of the unreformed counties. An examination of expenditure growth to basic economic and demographic conditions for the two groups of counties shows slightly different results from Table 7-3.

[Table 7-5]: Relationship between Mean Growth in Expenditure (% change) and Economic-Demographic Conditions for Metropolitan Counties with Commission Form of Government, and Metropolitan Counties that Changed Form to a Reformed Government

	Expenditure[1]	**Economy**		**Demography**[2]
Reform Status	Mean Growth	% Change in Service Sector Employment*, 1969-2000	No. of Manufacturing Sector Establishment, 1997	Central City Pop. (%), 2000
Changed to Reformed from Commission	–	–	+	–
Unreformed: Remained Commission	+	+	–	+

*Service sector employment is combined with FIRE (Finance, Insurance, Real Estate) and service sector.
+ indicates figures are above the mean.
- indicates figures are below the mean.
Notes:
1) (+/-) sign for mean growth in expenditure moves the same direction with percentage change in per capita property tax as well as percentage change in per capita debt.
2) Mean population density is larger for metropolitan counties with reformed county government.

In comparing Table 7-5 to Table 7-3, a difference can be seen in the service sector employment. Change in service sector employment was smaller for the change to reform government counties, whereas in Table 7-3 the reform metropolitan counties had a larger service sector employment.

A plausible explanation for this finding could be that the counties changed form of government in response to a change in population demographics. Despite the high population growth for the unreformed counties, the change to reform counties have a higher population density. This is consistent with findings that counties with larger population tend to adopt reformed government structure (Duncombe, 1966; DeSantis, 2002). Two of the major influencing factors of county government are socio-economic and demographic complexity (Marando, 1977). However the development stage of the county that recently changed to a reform government may involve

more construction and manufacturing, which will be more than the service sector. Once the population increases, the service sector will expand to meet the needs of the larger population and the changed reformed government metropolitan county will match the economic findings in Table 7-3.

It is possible that the population growth of the unreformed counties will engender a change in county government form, which could have happened in the 8 years since the statistics for this study were tabulated. A non-statistical review of the official web sites of the unreformed counties indicates that 10 of them have either reformed to a county executive or county council, or have made an adaptation to the commission form such as expand the role and prominence of the elected county judge to be a county executive, or have a legislative county council in addition to an administrative commission.

Although the results are not statistically meaningful, the expenditure growth of the metropolitan counties with unreformed governmental structure is larger. Since the change to reform metropolitan counties are a transitional group, and the results trend toward the clear results for the first comparison of reformed to unreformed, the alternate hypothesis is accepted; the expenditure growth for reformed county governments is smaller than that of single metropolitan counties with commission form of government. This implies that the growth of property tax or debt for metropolitan counties with commission form is larger also which shows lack of openness or democratic process between public and government.

7.1.2 Difference Between Local Governments

Many previous works on performance for service provision are based on municipal performance in context of policy outcome such as Peterson (1981), and fiscal stress in context of a major city such as Ladd and Yinger (1989). However, citizens live in an environment where service needs can be met from any one of the three local government types. It is reasonable to examine performance of service provision for the three types of government and compare.

There are several major distinctions between the types of local governments. First relates to legal standing and service scope between municipal, and county and special district governments. Municipal governments are legally bonded by the state with discretionary power, and they are operated as business corporations. A limitation of municipal governments serving area-wide is that municipalities serve citizens within their boundary. County and special district governments are not incorporated and not as independent, but they share features such as quasi-corporations and can serve across municipal boundary lines. Morgan and Kickham (1999) state several differences between counties and municipalities; 1) larger dependency of county government on external financial assistance; and 2) (applies to commission only) multiple elected officials or row offices hinders administrative effectiveness due to lack of single chief executive to provide a unified administration and strong policy leadership (p. 316-7).

The second distinction relates to service demand and population. As described in Chapter 5, the mean population increase during the study period in single metropolitan counties is near 60%. Ladd (1998) described a dichotomy where increased population permits lower per capita spending due to the economy of scale of higher density, but a larger population increases costs of

service because of the impact on the environment (for example, congestion). The increases may result in suburbanization because residents are more likely to move to other communities to avoid rising costs of public service.

The third distinction is between counties with many or few municipalities or special districts. County expenditure levels depend on the range of functions that municipal (and special district) governments perform (Park, 1996: p. 48; Liebert, 1974; Dye and Garcia, 1978; Stein, 1982). Functional responsibilities represent the current scope of services and exhibit a tendency to expand existing services and adopt new ones. Counties with more service functions are likely to have less municipalities and less population and therefore grow faster than counties with fewer service functions.

The fourth distinction is between older and younger counties. The county governments in older, established areas tend to provide more comprehensive services to residents because the residents demand more services (Liebert, 1974).

The next section attempts to explore relationships between growth in expenditures and economic-demographic conditions for more or less share of service responsibility by types of local government.

7.2 EXPENDITURE AND SHARE OF SERVICE RESPONSIBILITY BY LOCAL GOVERNMENT TYPE

Changes in share of public service responsibility provided by each type of local government have a relationship with overall growth in area-wide expenditure. Since the time period of the data points in this study is 28 to 30 years, these 7 election cycles are enough time for the citizens' needs to be known and answered by the governments, or in other words, all governments provide the services and quality demanded by their citizens. Therefore, this paper focuses on an administrative process measure, as advocated by Woodrow Wilson (1887). The larger the expenditure growth rate, the inferior the fiscal performance on service cost control. The less the growth rate of expenditure, the superior the fiscal performance. For example, the metropolitan area (county) governments respond to service demands. A response with an overall growth rate of 5 is less desirable than expenditure growth of 4, because a value of 4 satisfies the citizen's service needs with less expenditure.

To explore the relationship between shares of service responsibility of each local government type and the growth in expenditure, hypothesis testing will be performed by dividing the changes of service shares into two groups, decreased and increased.

7.2.1 County Service Share Relation to Expenditure Growth

Although the performance of county government's primary services is area-wide and generally defined as state-purposed, service functions can expand in county areas with no municipality or special district. According to Todd (1991), "a wide array of new responsibilities by counties

fulfilling the role of 'urban service providers' has elevated the importance of counties in an increasingly complex service-delivery structure" (quoted in Benton and Menzel, 1993). Benton and Menzel state that the service role of counties is becoming similar to that of municipalities with per capita expenditures increasing at a rate faster than municipal expenditures (1993: p. 57).

Furthermore, Martin (1993) claims that county governments were not adequately prepared to respond to the service demand, and were not structured or legally authorized to provide general public service (p. 11). Also many counties are unreformed, and without professional personnel for administrative functions (Shafritz and Russell, 2000). This makes it less likely that they would identify organizational goals or facilitate reform movement ideals such as rational operations in business, or objective decisions for development and policies. For all these reasons, it would not be surprising that service provision (responsibility share) by county governments will be inefficient and ineffective, and contribute to a higher overall expenditure growth in the aggregate county or metropolitan area.

Hypothesis III

$H_{a:}$ Mean of area expenditure growth is greater when county service share increases.

$H_{0:}$ Mean of area expenditure growth is not greater when county service share increases.

[Table 7-6]: Relationship between Change in County Service Share, 1972-1992 and Mean Growth in Expenditure (% change), 1970-2000

Category of Change in County Share	No of Observation	Mean Growth in Expenditure*
Decrease (Change rate<0)	42	559.8
Increase (Change rate≥0)	23	592.6
Total Growth in Expenditure (Mean)		571.4

Note: See Appendix Table A-33 for calculation of t-statistics for hypothesis testing.
* Difference of mean growth in expenditure is not statistically significant at 0.1 level

Table 7-6 demonstrates that at the county level, the increased county service share resulted in a larger expenditure growth beyond the total mean expenditure growth. In metropolitan areas with decreased county share of service, the expenditure growth is less than the total mean expenditure growth[8].

7.2.2 Municipal Service Share Relation to Expenditure Growth

The competitive nature of municipal governments is reinforced by the adoption of the reinventing government movement at the federal level in the mid 1990s. This program was an attempt to solve the declining revenues caused by tax revolt and the changes in federal funding of local governments introduced by the Reagan administration (Shafritz and Russell, 2000; Frederickson, 1996).

[8] Hypothesis testing for the two sample t-test demonstrates that calculated T-statistic=0.777< critical value of T=1.282, with df=(65-2), α=0.1, and right tailed test (Table IV from Weiss, 1995). This shows that those metropolitan counties with more use of county service share have not experienced higher expenditure growth than those metropolitan counties with less use of county service share.

Embracing pluralistic ideals as well as objective business values for administrative functions, such as production and distribution, and municipal competition, supports the economic public interest for the residents within each municipality. This tends to lower service expenditure overall because service bundles can be economized by resident's preferences (Tiebout, 1956; Tiebout, Ostrom, and Warren,1961; Bish and Ostrom, 1973; Ostrom, 1975). Therefore utilization of municipal service share should contribute to lower overall growth in expenditure.

Hypothesis IV

$H_{a:}$ Mean of area expenditure growth is smaller when municipal service share increases.

$H_{0:}$ Mean of area expenditure growth is not smaller when county service share increases.

[Table 7-7]: Relationship between Change in Municipal Service Share, 1972-1992 and Mean Growth in Expenditure (% change), 1970-2000

Category of Change in Municipal Share	No. of Observation	Mean Growth in Expenditure*
Decrease (Change rate<0)	51	589.6
Increase (Change rate≥0)	14	505.1
Total Growth in Expenditure (Mean)		571.4

Note: See Appendix Table A-34 for calculation of t-statistics for hypothesis testing.
* Difference of mean growth in expenditure is statistically significant at 0.1 level

A small number (14) of single metropolitan counties experienced an increase in municipal share of service responsibility, and their overall expenditure growth is smaller compared to the mean of the metropolitan areas which experienced a decrease in municipal service share[9]. Table 5-8 shows there is a negative relationship between municipal and special district responsibility share.

[9] Hypothesis testing demonstrates that calculated T-statistic=-1.751 < critical value of T=-1.282, with df=(65-2), α=0.1, and left tailed test (Table IV from Weiss, 1995). This shows that those metropolitan counties with more use of municipal service share have experienced less expenditure growth than those metropolitan counties with less use of municipal service share.

The 51 metropolitan counties with a decreasing municipal responsibility share have an offsetting increase in special district share of service responsibility. This finding is discussed in the next section on special district service share relationship.

[Table 7-8]: Relationship between Mean Growth in Expenditure (% change) and Economic-Demographic Conditions for Use of Municipal Service, 1970-2000

Municipal Service by Service Share	**Expenditure**	**Economy**		**Demography**
	Mean Growth	Change in Service Sector Employment (%)*, 1969-2000	No. of Manufacturing Sector Establishment, 1997	Central City Pop. (%), 2000
Less Use	+	–	+	–
More Use	–	+	–	+

*Service sector employment is combined with FIRE (Finance, Insurance, Real Estate) and service sector.
+ indicates figures are above the mean.
– indicates figures are below the mean.
Note: (+/-) sign for mean growth in expenditure moves the same direction with percentage change in per capita property tax as well as percentage change in per capita debt.

Table 7-8 shows that with more use of municipalities for service delivery, service expenditure is smaller than the overall mean, so the alternate hypothesis is accepted. These metropolitan counties are also associated with a smaller number of manufacturing sector establishments, a larger increase in percentage of service sector employment, and a larger proportion of central city population. Interestingly, the expansion of service sector employment appears to be related to lower levels of suburbanization, and the manufacturing sector appears to be related to higher levels of suburbanization or perhaps a steady rural metropolitan county. An increase in manufacturing in these areas seems to imply factories are being developed in the countryside, and on the other hand, the service sector is being developed in urban centers. This is sensible in an age where manufacturing does not need high labor resources, transportation is highly developed and does not depend on the geographical centrality of cities, and citizens would object

to manufacturing facilities. The rural land is less expensive, and manufacturing requires more land than the service industry.

7.2.3 Special District Service Share Relation to Expenditure Growth

The increasing reliance on special districts as described in Chapters 1 and 2 is apparently due to their flexibility as a fiscal tool (Ladd, 1998), with lower costs and risks of development (Burns, 1994). Since special districts are often related to economic development and private sector capital investment (Burns, 1994; Lewis, 1996: p. 36; Nunn and Schoedel, 1997; Foster, 1997b), it is an important financing mechanism for rapid growth policies as well as creating public-private partnerships (Nunn and Schoedel, 1997: p. 61-63). It also helps municipalities or counties avoid state-imposed limits on local property tax rates and debt (Chicoine and Walzer, 1985) by shifting funding and costs to the special district. An empirical study by MacManus (1981) supports the view that utilization of special districts lowers the originating government's operating expenditure, but this study did not address the combined effect of the expenditure of the originating government and special district. Use of special districts implies that special districts are used to capture the debt, isolating the funding and costs, and using the property tax for remaining public services not related to the service of the special district.

The use of special districts creates more governments serving the population than if the municipalities or counties provided the services directly. Although use of special districts may contribute to fragmentation which renders budgetary inefficiency (Wildavsky, 1966), Lewis states that forming an area-wide special purpose government does not contribute to fragmentation because of its capability to capture regional-wide externalities (1996). Even in a

situation where Wildavsky's observation holds, the citizens obtain the benefits of the development and investment cited by Burns, Lewis, Nunn and Schoedel, and Foster. Analysis of special district service share and overall expenditure growth is a more appropriate perspective than basic expenditure because of its sensitivity to the overall economic condition. It is expected that despite the fragmenting nature of special districts, increased service by special districts is associated with smaller overall expenditure growth.

Hypothesis V

H_a: Mean of area expenditure growth is not greater when special district service share increases.

H_0: Mean of area expenditure growth is greater when special district service share increases.

[Table 7-9]: Relationship between Change in Special District Service Share, 1972-1992 and Mean Growth in Expenditure (% change), 1970-2000

Category of Change in Special District Share	No. of Observation	Mean Growth in Expenditure*
Decrease (*Change rate* < *0*)	12	534.5
Increase (*Change rate* ≥ *0*)	53	579.8
Total Growth in Expenditure (Mean)		571.4

Note: See Appendix Table A-35 for calculation of t-statistics for hypothesis testing.
* Difference of mean growth in expenditure is not statistically significant at 0.1 level

As shown in Table 7-9, an increase in use of special districts contributes to a larger growth in overall expenditure for service provision[10]. Thus the alternate hypothesis is rejected, and contrary to expectations, the null hypothesis is accepted. Further analysis on economic and

[10] Statistical assessment for hypothesis testing is that calculated T-statistic=0.870 > the critical value of T=-1.282, with df=(65-2), α=0.1, and left tailed test (Table IV from Weiss, 1995). This result does not confirm the alternative hypothesis.

demographic conditions is useful to attempt to explain the result. Although the difference of mean growth in expenditure is not statistically significant, it is important to examine its relationship to economic-demographic condition. This is because special district usage is considered an important mechanism for economic growth. It is also useful to compare the results to the results for municipal service share because of the apparent service expenditure substitutional relationship between municipal and special district service share, as shown in Table 5-8.

[Table 7-10]: Relationship between Mean Growth in Expenditure (% change) and Economic-Demographic Conditions for Use of Special Districts, 1970-2000

Special District Service by Service Share	**Expenditure**	**Economy**		**Demography**
	Mean Growth	Change in Service Sector Employment (%)*, 1969-2000	No. of Manufacturing Sector Establishment, 1997	Central City Pop. (%), 2000
Less Use	–	+	–	+
More Use	+	–	+	–

*Service sector employment is combined with FIRE (Finance, Insurance, Real Estate) and service sector.
+ indicates figures are above the mean.
– indicates figures are below the mean.
Note: (+/-) sign for mean growth in expenditure moves the same direction with percentage change in per capita property tax as well as percentage change in per capita debt.

Table 7-10 shows the opposite of Table 7-8, as predicted by the disproportionate relationship between municipal and special district service shares in Table 5-8. The larger growth in expenditure is associated with a larger number of manufacturing sector establishments for metropolitan counties with more use of special districts. Less service sector employment and smaller central city population density are associated with an increasing overall county wide expenditure growth. The metropolitan counties utilizing special districts for service provision

show low density, and based on Ladd's study of 1998[11] (referenced in Chapter 2), may incur higher expenditures regardless of government type or fragmentation level.

Since special district formation is associated largely with development, this finding suggests that for areas with increases in special district service share, there are other costs related to development. For example, a developing metropolitan county that increases residential or retail units will need to increase government expenditures for other services. This could explain the positive correlation between special district service share and per capita expenditure as shown in Tables 5-12 and 5-13.

7.2.4 Shares of Service Responsibility and Effectiveness of Overall Service Cost Control Performance

This section explores the relationship between service for each type of government and the overall service expenditures of the aggregate governments in the single county metropolitan areas. The service measure used for this exercise is the responsibility service share. The typology method is used, with four sets of effectiveness measures, from Most Effective to Most Ineffective; and two sets of aggregate metropolitan expenditure growth, above and below the mean growth. A type of government with more responsibility service share associated with aggregate expenditure growth below the mean is considered more effective. A government type with more responsibility service share associated with above mean expenditure growth for the aggregate single county metropolitan area is considered more ineffective. The use of two

[11] Ladd stated that sparsely populated and densely populated areas generate higher public sector costs than moderately dense areas (1998).

categories for below and above the mean of growth in overall metropolitan expenditure is consistent with the previous sections. Table 7-11 illustrates a relationship between level of change of local government service share, and effectiveness measured as limiting growth in overall expenditure between 1970 and 2000.

[Table 7-11]: Effectiveness Analysis based on Change of Service Shares of Local Governments and Growth in Expenditure

Expenditure Growth Category	**Most Effective**	**Effective**	**Ineffective**	**Most Ineffective**
Below Mean *(Growth rate < 5.7)* *[N=41]*	(–) Special District *Mean=4.6*	(+) Municipality *Mean=4.7* (–) County *Mean =4.7*	(–) Municipality *Mean=4.8* (+) Special District *Mean=4.8*	(+) County *Mean=4.9*
Above Mean *(Growth rate ≥ 5.7)* *[N=24]*	(–) County *Mean=7.3*	(+) Municipality *Mean=[7.36]* (+) Special District *Mean=7.4*	(–) Municipality *Mean=[7.38]* (–) Special District *Mean=7.5*	(+) County *Mean=7.6*

Note:
– sign indicates negative change (less use).
+ sign indicates positive change (more use).

Table 7-11 shows that more use of county service is associated with most ineffective contribution to the growth in expenditure. Conversely, less use of county service is associated with effective (lower) expenditure growth regardless of level of expenditure growth. More use of municipal service appears to be effective for both below and above mean categories of the growth in expenditure, and less use of municipal service provision is related to overall ineffective expenditure growth management.

Service share for municipal and special district governments are both effective, and the table shows this from two perspectives. More use of both governments are associated with lower aggregate metropolitan area expenditure growth, and less service from these governments is associated with above mean expenditure growth.

Adjustment effects from special districts are mixed. The most effective expenditure growth is seen when use of special districts is below the mean of the overall expenditure category. Also, more use of special districts was somewhat effective with above mean growth in the expenditure category. However, higher special district share is ineffective for cost control when the expenditure growth is below the mean. Less use of special district is shown to be unrelated to expenditure growth when the overall expenditure growth is above the mean. Apparently special districts are useful as a balancing mechanism when service needs fluctuate (Ladd, 1998).

The results for the expenditure growth for the metropolitan counties with more or less use of types of local government for service provision show mixed results. Contrary to expectations, an increase in special district service share is not necessarily associated with a lower overall growth in expenditure (see the discussion regarding Hypothesis V and Tables 7-9 and 7-10). But as expected, the overall assessment is that increase of municipal service share is most effective and increases of county service share are less effective for service cost control (Hypothesis III and IV, and Tables 7-6 through 7-8).

7.2.5 Study Findings and Suggestions for Legislative Consideration

Table 7-12 shows the results for the exploration of expenditure growth for metropolitan counties with reformed or unreformed governments. It shows that for metropolitan counties, reform governments are associated with less expenditure growth than unreformed counties.

[Table 7-12]: Relationship Between Mean Growth in Expenditure and Performance of Service Cost Control for Reformed and Unreformed Metropolitan Counties

	Governmental Structure		
	Reformed	Unreformed	Difference*
Mean Expenditure Growth	5.1	6.5	–1.4

* – indicates competent performance of reformed governmental structure for cost control.

There seems to be positive results to the observation that reformed governments embrace the progressive ideals of professional, expert knowledge, effective budgeting practices, and centralized control and capacity to resolve tension between pressing social forces in modern industrial society (Pammer, 1990: p. 49; Lyons,1978).

Table 7-13 is a summary for the results of the service expenditure growth analysis by types of local government. The area expenditure growth is shown for each type of government's service share and whether that government type is increasing or decreasing its service share. The table shows that expenditures increase whether the service responsibility share for that type of government is increasing or decreasing.

[Table 7-13]: Effect of Expenditure by Government Type on Area-Wide Expenditure

	Area Wide Expenditure Growth When Service Share is:		
Hypothetical Single Service Share	Increase	Decrease	Difference*
County	5.9	5.6	+0.3
Municipality	5.1	5.9	–0.8
Special District	5.8	5.3	+0.5

*+ indicates ineffective performance for cost control when services are provided more by that type of government.
- indicates effective performance for cost control when services are provided more by that type of government.

To highlight the expenditure growth, the table values are calculated for each type of local government as if only that particular government type is providing services. The conclusion for decreasing service share for municipal governments matches that of increasing municipal service share, that municipal service is most effective. This is because when municipal service share decreases, the area-wide expenditure growth is the largest. This is most likely due to service being provided by less effective types of government in those single metropolitan counties with lower municipal service share.

For special district or county service share, special district service provision appears to be more effective than county provision for both the increasing and decreasing service share. However, the difference between the increase and decrease for county service share is smaller than difference for special district service share, indicating that county service provision expenditures are more stable.

The difference between service provision by county and any other local government type is that county service is generally area-wide for the single metropolitan counties. Municipal governments do not provide area-wide service, and special districts can provide area-wide service but usually do not, because they can only be area-wide when sponsored by the county. The difference between increasing and decreasing service responsibility share for county service provision is closest to zero, which seems to imply less fluctuation in, or more stable, service provision. This puts county service provision in a more positive light, especially when considering their ineffectiveness may be due to servicing unincorporated parts of the county. Another consideration in favor of counties is that their apparent ineffective expenditure control may be short term, as unincorporated areas receiving services become more populated and less costly to serve, or incorporate to municipalities and no longer require county services. Or, the county service may expand service to municipal areas and become a true area-wide and more cost effective provider. At the same time, the less effective results for special districts in the difference analysis may be due to their dual role as area-wide or municipal-specific.

Special districts appear to be a pragmatic approach to fund additional service needs in the current political and cultural climate of citizens' unwillingness to pay for development, or to manage a declining revenue base. For this reason the increasing trend of service delivery through special districts is expected to continue. Special districts ability to provide area-wide service could be used to create area-wide service delivery for services that benefit from efficiency or equity reasons by being provided area-wide, but are not feasible to be provided by the county. They could also be used to span multiple counties, as oversight board structure permits representation from the various constituencies, as well as for economic development and revenue generation.

Further analysis of area-wide service provision from county and special district governments is shown in Table 7-14. This examines the relationship between growth in expenditure and economic-demographic conditions for the types of local government for service provision.

[Table 7-14]: Relationship between Mean Growth in Expenditure (% change) and Economic-Demographic Conditions, 1970-2000 for More Use of Local Governments for Area-Wide Service Provision, 1972-1992

	Expenditure	**Economy**		**Demography**
Service Share (More use)	Mean Growth	Change in Service Sector Employment (%)*, 1969-2000	No. of Manufacturing Sector Establishment, 1997	Central City Pop. (%), 2000
County	+	+	–	–
Special District	+	–	+	–

*Service sector employment is combined with FIRE (Finance, Insurance, Real Estate) and service sector.
Note: +/- signs are based on mean comparison of service share from each of the same local government type.

The table shows that larger expenditure growth is associated with greater service share of both county and special district, and with a smaller proportion of central city population. But county service share is associated with higher service sector employment which may be associated with growth in unincorporated areas. The expansion of service sector employment, or a homogeneous population (e.g., by income level) may be associated with suburbanization. As Benton and Menzel (1993) explained regarding areas similar to this group, with rapid growth of population or development, affluent residents may have relocated to unincorporated areas outside of municipal boundaries. Since affluent communities desire more growth oriented services such as police and education (Schneider, 1989), expenditures from such unincorporated county areas may be fueling the expansive growth in county service share for this group.

The larger growth in expenditure is associated with a larger number of manufacturing sector establishments for metropolitan counties with more use of special districts (see discussion for Hypothesis V). Less service sector employment and smaller central city population density are associated with an increasing overall county wide expenditure growth. The metropolitan counties utilizing special districts for service provision show low density, and based on Ladd's study of 1998[12] (referenced in Chapter 2), may incur higher expenditures growth regardless of government type or fragmentation level.

This suggests that economic development may not be directly associated with suburbanization regardless of the industrial focus the metropolitan county adopts. Lower density in a central city indicates that citizens prefer suburban residency over city residency, beyond their economic tie to the city through work. The cost that city residents have to bear may be larger due to the cost of maintaining decaying infrastructure or other intangible quality such as centrally located amenities.

There are several actions that can be taken regarding public service provision. Since the benefits of reform governments are clear, state governments should give counties the option of using reform government, for states that only permit commission form of government (Duncombe, 1966), and provide discretionary authority to strengthen counties' role in area-wide executive leadership such as more capacity for debt issuance in order to provide more development funding. County governments should consider reform government in order to more professionally manage and lead service demand or development activities as a municipal

[12] Ladd stated that sparsely populated and densely populated areas generate higher public sector costs than moderately dense areas.

coordinator and arbiter. Municipalities and counties should engage in discussion to evaluate services to see where area-wide provision is beneficial, and where municipal differentiation is beneficial. Federal government should consider awarding more grants at the county level, which would reduce the independence of municipalities receiving federal funds and engender more holistic development for the areas. The Metropolitan Planning Organization (MPO; Miller, 2002) can be a model for this type of grant program.

Finally, the results indicate service efficiencies for areas with a higher proportion of population in the central cities, as well as efficiencies for services provided by municipalities. Annexation activity or municipal formation for unincorporated land should be encouraged to give those citizens representation for planning area-wide services, and to provide services that should be provided at the municipal level. Maintaining central cities prominence should be seen as beneficial for the region for the overall expenditure performance benefits. Central cities tend to identify the area nationally or even internationally, and this leadership role is also beneficial. Area identity-related amenities (museums, professional sporting arenas, botanical gardens, zoos, and cultural organizations) tend to be located centrally. This may require resources from MSA's as a whole to augment city funding for maintenance and beautification.

7.3 SUMMARY OF STUDY

[Table 7-15]: Summary of Hypothesis Assessment for Expenditure and its Growth

Category	Test Methods	Finding
The public service expenditure is associated with shares of service responsibility by each type of local government.	Correlation for service share by types of local governments	County and municipal shares have negative relationship with per capita expenditure, and special district share has positive relationship with expenditure both 1970 and 2000 periods.
***Hypothesis I*:** Mean of area expenditure growth is smaller with reformed metropolitan counties than the metropolitan counties with unreformed government.	Two sample t-test with non-equal variance assumption to examine difference between the metropolitan areas with reformed (council-manger and council-elected executive) and the metropolitan areas with traditional form (commission) of county government.	Metropolitan counties with reformed county government experienced lower expenditure growth than those metropolitan counties with unreformed county government.
***Hypothesis II*:** Mean of area expenditure growth with a change in form of county government to reformed from commission is lower than that of single metropolitan with commission form.	Two sample t-test with non-equal variance assumption	Reformed metropolitan counties from traditional government have not experienced less expenditure growth than those remained with traditional government. However reformed metropolitan counties tend to embrace the progressive ideals of professional and centralized budgeting practices.
***Hypothesis III*:** Mean of area expenditure growth is greater when county service share increases, than the mean of area expenditure growth when there is a decrease in county service share.	Two sample t-test with non-equal variance assumption	Metropolitan counties with more use of county service provision have not experienced significantly higher expenditure growth than those metropolitan counties with less use of county service provision.
Hypothesis IV: Mean of area expenditure growth is smaller when municipal service share increases, than the mean of area expenditure growth when there is a decrease in municipal service share.	Two sample t-test with non-equal variance assumption	Metropolitan counties with more use of municipal service provision have experienced significantly less expenditure growth than those metropolitan counties with less use of municipal service provision.
Hypothesis V: Mean of area expenditure growth is smaller when special district service share increases, than the mean of area expenditure growth when there is a decrease in special district service share.	Two sample t-test with non-equal variance assumption	Metropolitan counties with more use of special district service provision have not experienced smaller expenditure growth than those metropolitan counties with less use of special district service provision.

Note: All tested at 0.1 significance level.

[Table 7-16]: Summary of Results by Region

Metropolitan Areas Characteristics	***Northeast***	***Midwest***	***South***	***West***
Demography in 2000				
MSA Population	330,076	187,953	332,029	1,162,32
Land Size by Sq Km	1,521	1,735	2,830	8,168
Density	809.1	121.9	123.4	204.2
Mean Age of County	222	167	151	135
Central city pop to MSA pop (%)	27.7	54.3	48.7	44.0
No of Governments in MSAs in 1997	67	52	29	78
No. of County	1	1	1	1
No. of Municipality	34	25	11	15
No. of Special District	33	25	17	62
Fiscal Condition in 1997				
MSAs Per Capita Expenditure	2,742	2,457	2,353	2,783
Property Tax Generating Effort	0.033	0.028	0.024	0.020
Per Capita Property Tax	962	804	554	582
Per Capita Income, 2000	28,632	28,342	23,247	29,370
Per Capita Expenditure for Service Performed, 2000 (Predicted)				
With Model 1	2,579	2,462	2,458	2,736
With Model 2	2,667	2,522	2,455	2,659
With Model 3	2,637	2,466	2,489	2,702
Local Government Service Share, 1992 (%)				
County Share	14.7	19.2	23.0	20.6
Municipality Share	64.6	64.1	56.0	43.4
Special District Share	20.7	16.7	22.0	36.0
Total MPDI	4.53	3.21	2.65	3.46
Overall Expenditure Growth (%), 1970-2000				
Model 1	525.3	569.4	581.8	494.9
Model 2	578.4	513.0	736.1	455.3
Model 3	605.5	524.0	715.1	457.7

[Table 7-17]: Relationship between Mean Growth in Expenditure (% Change), 1970-2000 and Economic-Demographic Conditions by Region

	Expenditure	**Economy**		**Demography**	
Region	Mean Growth	% Change in Service Sector Employment, 1969-2000	No. of Manufacturing Sector Establishment, 1997	Central City Pop. (%), 2000	% Change in Ratio of City Pop. to Total MSA Pop., 1970-2000
Northeast	605.5	155.8	498	27.7	–20.7
Midwest	524.0	189.6	238	54.3	–9.7
South	715.1	237.8	307	48.7	–14.0
West	457.7	284.5	1,850	44.0	5.8
Total (Mean)	571.4	231.7	804	46.0	–7.4

8.0 CONCLUSION AND FUTURE STUDY

The major objective of this study is to explore the relationship between public service and metropolitan conditions, using service expenditure as a proxy for service provision. Growth of expenditure is compared within government structure relations to such influencing factors as economic and demographic conditions during 1970 and 2000. Service expenditure is studied for metropolitan county government structure by comparing reformed, council-manager and council-elected executive, to unreformed commission, and proportional share of service responsibility of each government type (county, municipal, and special district).

Comparison of expenditure growth between reform vs. unreformed single MSA county governments shows that the reformed metropolitan counties tend to have lower growth in service expenditure. This suggests that the governmental structural difference in authority, leadership, and decision making (Menzel, 1996: p. 205) may be a driving force for different facets of organizational development as well as government accountability to public service. In general, utilization of municipal service provision and increased managerial competency of public administration are related to lower increases in service expenditures.

During the period 1972-1992, the aggregated share of service responsibility for both county and municipal governments has declined. There has been a corresponding increase in special district service share. The service share relationships between municipality and special district, and also between county and special district, are negatively related, as shown in Table 5-8, with zero

order correlation at -0.813 and -0.385 respectively. This study shows that in general, the service share from special district use is rather associated with larger cost related development. The increase in special district service share, then, is likely due to increasing complexity and financial demand from changes in demography, as well as fiscal constraints from residents' resistance of property taxation and state imposed mandates limiting debt issuance or property tax. Use of special districts appears to be a pragmatic approach to respond to increasing service without additional municipal or county government taxes to fund the additional cost. That is, to protect current residents from the new development and to avoid possibly higher property taxation for rising service cost, municipality may be transferring development cost to special districts.

Metropolitan county wide service expenditure has risen considerably during this study period. This may be because of the expansion of service sector employment and relocation of affluent residents to unincorporated areas outside of municipal boundaries. Expenditures from such unincorporated county areas may be fueling the expansive growth in county service share. These service expenditures may not truly be systemic to county governments ability to provide service, as they may represent inefficiencies of newly providing services to the more dispersed and rural areas of the county. As these areas incorporate, the new municipalities could be providing the services, or perhaps the county will begin to provide the service in municipalities and realize area-wide aggregate cost savings.

Even though more use of special districts may create rising expenditure growth, given the desirability of economic development in local communities and suburbanization in the MSAs,

and generally increasing demand for service provision, the trend of service delivery through special districts is expected to continue.

However attractive special districts may be, critics contend that direct service provision through an elected government is more responsive to citizens and their leadership, and finances are more transparent, because of the check and balance mechanism of multiple areas of these types of government, and more public involvement.

Table 3-5 shows increasing funding of special districts from federal sources and special districts' increasing ability to generate larger internal revenue, combined with a corresponding decline in funding from local (municipal and county) governments. This financial independence of special districts may tend to accelerate their relationship to increased overall service expenditure, through the inter-governmental funding sources, and because their independence means their staff may keep the special district in operation longer than needed to perform their service. Finally, the apparent ease with which municipalities can sponsor special districts may make it less likely that the municipalities will explore multiple-jurisdiction or county-wide service provision.

For area-wide service provision when the metropolitan county government is unable to provide such service, economies of scale may be obtained by means of fiscal or administrative mechanism. Coordinating service provision through one of these alternate regionalizing mechanisms can be done with governments, community organizations, or sponsored by the county or set up similar to a Metropolitan Planning Organization (MPO). Special districts can be

used as an area-wide coordinating mechanism, as they are when utilized for special purposes such as cultural or business districts, because of the wide geographical scope and multi-sponsoring government capabilities of special districts.

Since special districts have some correlation to development, another advantage to using a county mechanism is the coordination effect counties can bring to both the decision, and the development process. For example, when choosing a site for a needed development, a municipality has a much smaller area within which to choose, and increased need for transportation and utility services across nearby municipal boundaries may not be fully explored. Having the county involved may take away some independence from municipalities, but it contributes to more comprehensive planning approach and may reduce overall costs by spreading related development issues across a larger population. The county can also coordinate transfer payments or other mechanisms to compensate, for example, for a development which the county input results in being placed within two or more municipalities rather than being situated in only one.

Although the results are mixed, there are several cases where a more populous central city is a characteristic of metropolitan areas with effective expenditure control. This finding, even though it is a mixed result, combined with the primary role of central cities in identifying metropolitan areas, should give reason for stakeholders in the metropolitan area to support central city amenities and the city to pursue projects to create a more livable environment for global awareness, and attraction of employers and a competent labor force.

Suggestions for future studies are discussed, to further explore those items which have been identified as limitations of this study, or interesting findings of this study.

8.1 LIMITATIONS OF THIS STUDY

The focus on single county metropolitan areas is a small sample size which can limit comprehensive understanding of metropolitan conditions because there are many more complex metropolitan areas in the United States. However, the choice of single metropolitan counties was purposeful in order to create a normalized benchmark from which further study of heterogeneous metropolitan areas could be performed. This is discussed more in the Future Study section.

An example of the limitations of the single metropolitan county can be seen in the results that there is no considerable difference in expenditure growth between metropolitan counties which remained traditional form and those that changed to reformed governments during 1970-2000. However, single metropolitan counties which had governmental structural change of any kind exhibited a higher tendency for utilization of special districts and more decline in municipal service share than those counties retaining the same government form. In order to clarify the effects on expenditure growth and form of county governments, a larger sample size with comparative quasi-experimentation approach may be helpful.

New England was excluded from this study because the municipal government structure is unique. Future studies should develop methods to include New England.

Overall assessment of expenditure and expenditure change during 1970 and 2000 show that expenditure is less influenced by the study variables in 2000 than 1970. This indicates there may be other factors influencing expenditure for service provision which have not been explored in this study. These variables can be divided into four categories, socioeconomic, relationships between governments and agencies, development, and capacity. It is important to note that the study did not study outcome of service provided, or about governments ability to incorporate modern governance models such as New Public Management. Information regarding any of these types of variables would be an interesting addition. Examples and further discussion follow.

The category of socioeconomic variables of interest include racial composition, age differentiation, geographical location (suburbanization), education attainment, income level, and immigration status.

The second type of uncontrolled variables are about relationships, such as 1) between the local governments themselves, that is the level of cooperation for service delivery through tax sharing, cultural asset district, or others; 2) between governments and non-profit institutions, volunteer organizations, or other social organizations participating in service provision; and 3) between the local governments and higher-level governments, such as from mandates and grants.

The category of development include variables such as level of employment in different industrial sectors or industrial earnings. This information, in combination with socioeconomic

trends and the fiscal (funding) relationships of higher-level governments on local governments, may shed light on the increase in special districts, and other factors that influence fragmentation.

The fourth and last category of uncontrolled variables are capacity, of revenue generation and cost control. Although legal mandates imposed by federal and state government on raising taxes, and debt limits are central to budgetary decisions, research shows that revenue availability is among the most important factors affecting expenditure. With rapidly changing demographic and socioeconomic conditions due to domestic, world wide labor movement, and immigration, attention can be paid more to tax generating effort. The capacity of cost control was represented in the current study by the reformed vs. unreformed county government analysis. Other information of this type could incorporate the government form of the municipalities, the inclusion of information about program adoption such as New Public Management, and subtle distinctions of government forms such as a commission that has a public manager that were not captured by the simplistic reformed and unreformed variable values of the study.

8.2 FUTURE STUDY

This study hopes to provide a benchmark for future studies that examine metropolitan areas as if they are a single entity. This is not currently feasible since most MSAs are comprised of multiple counties, some of them within different states. This study can be a benchmark because, with the use of single county MSAs, the county is the MSA. Some of these MSAs maintain their own MSA identifying number, but they are also part of a consolidated MSA. Perhaps studies that examine different ways of combining county data for consolidated MSAs compared to the single county MSAs within the consolidated MSAs can provide a check on statistical methods

that will show valid methods of creating consolidated information about the consolidated and multi-county MSAs.

One of the dichotomies of modern U.S. governance is the economic health of the metropolitan areas compared to their central cities. Studies in this area should be conducted on the single-county MSA set to provide similar benchmarks for studies of all MSAs compared to their central cities. This study focused on the local effect, and did not consider the relationship to the state or federal level. Studies that examine these relationships could also potentially be useful in expanding the study focus to larger MSAs. There are some interesting areas that could also be explored, or to further develop the explanatory power of this method for use in examining all national MSAs.

First, the larger political and economic context of the metropolitan areas needs to be explored. The political context includes state legislation governing the creation and legal actions possible to the local governments and special districts, as well as incentives or disincentives for regional cooperation. The economic context includes tax sharing, transfer payments, and other funding from state governments to local governments, which appears to be an attribute of service provision in the metropolitan areas.

Second, further study is needed to explore the continuum of forms of governments and the relationship of central city and county governments. Many traditional county governments have adopted a manager, creating a "commission-manager" form of government, an adaptation which permits better performance (Benton and Menzel, 1993). Official county web sites often show an

executive prominence given to the county judge position, which moves the commission form closer to a council-elected executive form of government. These nuances were not captured in the data available for this dissertation, but it should be studied. Also, for a future study comparing metropolitan areas with their central cities that include the government structure of cities, those with a weak mayor should not be categorized as a Mayor-council government, since these ceremonial mayors have no functional role. They should be included with the council-manager cities, as that is what they are; or kept in a separate category to see if the office of the mayor, even a weak mayor, provides benefits of leadership.

Third, more research and data at the operational agency level are needed to demonstrate service provision in which local government is the best for the particular service, especially area wide or municipal, and to clarify the governmental structure and metropolitan conditions within the political and cultural climate. Some studies have been conducted in this area, but they tend to be case studies or geared for specific service functions. The "School District and Municipal Reorganization: Research Findings & Policy Proposals" presentation to the Michigan legislature in 2007 is a meta analysis of earlier studies. The results of this study provide a useful guide to future studies in this area. Although many specific service areas were presented, the overriding theme of the findings is that services that are capital-intensive tend to benefit from aggregated service provision, and services which are labor-intensive tend to benefit from disaggregated service provision. Along similar lines, an investigation of the relationship between overall MSA expenditures and the different government types in more detail could shed light on service provision in the MSAs. For example, is there any correlation between service responsibility of local government types and the county government form? For those counties which changed

their government, does the change in governmental form have any relation to the service shares of any particular government type? There may be value in placing the service shares and government forms study within the framework of regionalism (Miller, 2002: p. 54-57).

Finally, it should be said that lower expenditure growth does not always mean good fiscal performance in governing metropolitan areas. Future studies on the relationship of socio-economic conditions should be conducted to determine if there are underlying reasons for the expenditure increases that are not related to the government form, such as a general slowing down of the economy being related to lower service expenditures. Higher levels of performance as captured in the study can indicate managerial competency and cost effectiveness, or effective leadership which may also improve socio-economic conditions in the metropolitan areas. The presence or absence of a regional council, and the service areas discussed by its members, should be tracked and included in future studies. Improving the ability of the public sector to properly deal with the changing metropolitan environment is the key element toward better governance in the metropolitan areas.

APPENDIX

SUPPLEMENTAL DATA AND ANALYSIS

Table A-1: Literature Review on Expenditure and Government Structures

Author	Study	Findings
Lineberry and Fowler, 1967	Studied for contribution to the notion of reformed and unreformed government structures; the notion that council-manager are associated with socially homogeneous middle-class, mobile, and growing populations, and the notion that unreformed governmental structures are associated with socially heterogeneous cities with large proportion of working class residents, and stable or declining growth rates.	Reformed governments (council-manager) taxed and spent at lower levels than unreformed government (Mayor-Council). Political structure had a significant interactive impact on the relationship between the socioeconomic environment of municipalities and their public policies. Unreformed jurisdictions tended to be more responsive to the socioeconomic characteristics of their constituencies than reformed jurisdictions.
Lyons (1978)	Investigated reformed and unreformed cities' response to socio-economic pressures with 242 observation. Employed quasi-experimentation.	Reformed government is prone to respond to pressures which tends to reduce spending.
Schneider and Park,	Examined the total, developmental, and redistributive per capita	County-executive jurisdictions spend the most and perform the

1989	expenditures and number of functions performed by 162 counties in fifty of the largest MSAs using expenditure and form of government data from 1977.	most functions among the three basic forms of county government. The traditional commission counties were consistently last.
Dye and MacManus, 1990	Studied longitudinal state and local public sector growth over 33 years using ordinary least squares regression estimates. Examined factors influencing state and local expenditure using six variables; age of population, per capita income, federal transfers; reliance on state personal income tax revenues, and the size of the governmental bureaucracy per capita.	Found that the size of the public employee bureaucracy is the most significant predictor of state growth but not local growth. For local growth, the size of the youth population is the most significant variable, and this is also true for states.
Herbert Duncombe, William Duncombe, and Richard Kinney, 1992	Analyzed national survey of county officials for budget systems. They developed a model in which county budget outcomes are affected by four major categories of influence; 1) the priorities of officials such as county legislators, executives, managers, administrative officers, and department heads; 2) revenue availability and status of federal and state grants; 3) pressure from external players such as interest groups, public opinion, party leaders, and the media; and 4) legal	Revenue availability is one of the most important factors affecting the size of the budget. Other important factors affecting budgetary decisions are federal and state mandates, tax and debt limitation, and the priorities of county officials. In particular, county officials responded that increases in revenues from property taxes or other revenue sources are limited by state law.

	constraints such as limitation on increasing taxes, mandated expenditure increases, and reduced flexibility from earmarked funds.	
DeSantis and Renner, 1994	Conducted multiple regression analysis with yr 1989 pooled sample to examine expenditure patterns between different forms of county government. Included regions as independent variables in the models.	Difference in expenditures exists between different forms of government. Counties in the South, North Central, and Northeast tends to spend less than Western counties.
DeSantis and Renner, 1996	1295 counties are studied for government structure, political culture, socioeconomic environment, and expenditure for the period 1987-88.	Reformed counties were expected to spend more and be more responsive to population characteristics than unreformed counties. Democratic presidential vote had a positive and significant effect on county expenditures only among county-administrator governments. Socioeconomic factors were not more powerful determinants of expenditures in reformed counties than in unreformed counties.
Park (1996)	Examined the relationship between county government structure and expenditure growth among counties with data for 244 counties in the metropolitan areas for 1972,	Expenditure growth in total spending as well as in four specific service areas (developmental, redistributive, allocational, and public safety)

	1977, 1982 and 1987.	was greater for appointed county administrator governments.
Morgan and Kickham (July-August, 1999)	Conducted a quasi-experimentation using an interrupted pooled time-series design. 20 sample size is used, 10 for experimental group and 10 for control group between 1979 and 1992.	Changes in the form of county government had no effect on fiscal behavior. Spending differences for types of government was not statistically significant during the time period. Also, reformed counties have been less dependent on state and federal aid than unreformed counties.
Benton (2002)	Examined 413 counties for the spending behavior of all counties for 1992 with population of 100,000 or more. Tested spending between reformed and unreformed county governments by differentiating with chartered and non-charter county government types.	There is a strong association between the structure of county government and per capita spending. Reformed county governments with charter spent more than reformed county government without charter for all county services. Regardless of chartered or not, reformed government spent more than unreformed county government.

Table A-2: Single Metropolitan County FIPS Identification and County Names

Fips	MSAs	State	County	Fips Identification Change by 2002	Consolidated MSA by 2000
280	Altoona PA MSA	PA	Blair		
360	Anaheim--Santa Ana CA PM	CA	Orange	5945	Y
680	Bakersfield CA MSA	CA	Kern		
880	Billings MT MSA	MT	Yellowstone		
1040	Bloomington--Normal IL M	IL	McLean		
1240	Brownsville--Harlingen T	TX	Cameron		
1260	Bryan--College Station T	TX	Brazos		
1360	Cedar Rapids IA MSA	IA	Linn		
1400	Champaign--Urbana--Rantou	IL	Champaign		
1720	Colorado Springs CO MSA	CO	El Paso		
1740	Columbia MO MSA	MO	Boone		
2040	Decatur IL MSA	IL	Macon		
2200	Dubuque IA MSA	IA	Dubuque		
2320	El Paso TX MSA	TX	El Paso		
2360	Erie PA MSA	PA	Erie		
2400	Eugene--Springfield OR M	OR	Lane		
2560	Fayetteville NC MSA	NC	Cumberland		
2680	Fort Lauderdale--Hollywoo	FL	Broward		Y
2880	Gadsden AL MSA	AL	Etowah		
2920	Galveston--Texas City TX	TX	Galveston		Y
3040	Great Falls MT MSA	MT	Cascade		
3080	Green Bay WI MSA	WI	Brown		
3200	Hamilton--Middletown OH	OH	Butler		Y
3520	Jackson MI MSA	MI	Jackson		
3640	Jersey City NJ PMSA	NJ	Hudson		Y
3800	Kenosha WI PMSA	WI	Kenosha		Y
3960	Lake Charles LA MSA	LA	Calcasieu Parish		
4000	Lancaster PA MSA	PA	Lancaster		
4080	Laredo TX MSA	TX	Webb		
4200	Lawton OK MSA	OK	Comanche		
4360	Lincoln NE MSA	NE	Lancaster		
4480	Los Angeles--Long Beach	CA	Los Angeles		Y

4600	Lubbock TX MSA	TX	Lubbock		
4720	Madison WI MSA	WI	Dane		
4880	Mcallen--Edinburg--Missio	TX	Hidalgo		
5170	Modesto CA MSA	CA	Stanislaus		
5200	Monroe LA MSA	LA	Quachita Parish		
5280	Muncie IN MSA	IN	Delaware		
5990	Owensboro KY MSA	KY	Daviess		
6000	Oxnard--Ventura CA PMSA	CA	Ventura	8735	Y
6240	Pine Bluff AR MSA	AR	Jefferson		
6460	Poughkeepsie NY MSA	NY	Dutchess	2281	Y
6520	Provo--Orem UT MSA	UT	Utah		
6560	Pueblo CO MSA	CO	Pueblo		
6600	Racine WI PMSA	WI	Racine		Y
6680	Reading PA MSA	PA	Berks		
6720	Reno NV MSA	NV	Washoe		
6820	Rochester MN MSA	MN	Olmsted		
7120	Salinas--Seaside--Montere	CA	Monterey		
7200	San Angelo TX MSA	TX	Tom Green		
7320	San Diego CA MSA	CA	San Diego		
7400	San Jose CA PMSA	CA	Santa Clara		Y
7480	Santa Barbara--Santa Mari	CA	Santa Barbara		
7500	Santa Rosa--Petaluma CA	CA	Sonoma		Y
7640	Sherman--Denison TX MSA	TX	Grayson		
7840	Spokane WA MSA	WA	Spokane		
8120	Stockton CA MSA	CA	San Joaquin		
8200	Tacoma WA PMSA	WA	Pierce		Y
8440	Topeka KS MSA	KS	Shawnee		
8480	Trenton NJ PMSA	NJ	Mercer		Y
8520	Tucson AZ MSA	AZ	Pima		
8600	Tuscaloosa AL MSA	AL	Tuscaloosa		
8640	Tyler TX MSA	TX	Smith		
8760	Vineland--Millville--Brid	NJ	Cumberland		Y
8800	Waco TX MSA	TX	McLennan		
8960	West Palm Beach--Boca Rat	FL	Palm Beach		

Sources: "Bureau of Census" and "County and City Extra," edited by Deirdre A. Gaguin and Katherine A. DeBrandt and published by Bernan Press, 2002.

Table A-3: Number of Local Governments in Single Metropolitan Counties, 1997

MSAs	County	Municipality		Special Districts	Total
		Cities	Township		
Altoona PA MSA	1	9	15	26	51
Anaheim--Santa Ana CA PM	1	31		86	118
Bakersfield CA MSA	1	11		105	117
Billings MT MSA	1	3		34	38
Bloomington--Normal IL M	1	21	31	67	120
Brownsville--Harlingen T	1	18		35	54
Bryan--College Station T	1	3		8	12
Cedar Rapids IA MSA	1	17		10	28
Champaign--Urbana--Rantou	1	23	30	107	161
Colorado Springs CO MSA	1	8		62	71
Columbia MO MSA	1	9		15	25
Decatur IL MSA	1	12	17	51	81
Dubuque IA MSA	1	21		4	26
El Paso TX MSA	1	6		19	26
Erie PA MSA	1	17	22	51	91
Eugene--Springfield OR M	1	12		55	68
Fayetteville NC MSA	1	8		4	13
Fort Lauderdale--Hollywoo	1	28		35	64
Gadsden AL MSA	1	12		11	24
Galveston--Texas City TX	1	13		39	53
Great Falls MT MSA	1	4		22	27
Green Bay WI MSA	1	8	16	23	48
Hamilton--Middletown OH	1	11		5	17
Jackson MI MSA	1	7	19	2	29
Jersey City NJ PMSA	1	10	2	2	15
Kenosha WI PMSA	1	5	7	10	23
Lake Charles LA MSA	1	6		4	11
Lancaster PA MSA	1	19	41	61	122
Laredo TX MSA	1	3		3	7
Lawton OK MSA	1	10		9	20
Lincoln NE MSA	1	13		23	37

Los Angeles--Long Beach	1	88		196	285
Lubbock TX MSA	1	8		7	16
Madison WI MSA	1	25	34	26	86
Mcallen--Edinburg--Missio	1	21		39	61
Modesto CA MSA	1	9		64	74
Monroe LA MSA	1	4		0	5
Muncie IN MSA	1	7	12	15	35
Owensboro KY MSA	1	2		3	6
Oxnard--Ventura CA PMSA	1	10		55	66
Pine Bluff AR MSA	1	6		28	35
Poughkeepsie NY MSA	1	10	20	29	60
Provo--Orem UT MSA	1	22		29	52
Pueblo CO MSA	1	3		27	31
Racine WI PMSA	1	9	9	21	40
Reading PA MSA	1	32	44	59	136
Reno NV MSA	1	2		18	21
Rochester MN MSA	1	6	18	2	27
Salinas--Seaside--Montere	1	12		59	72
San Angelo TX MSA	1	1		10	12
San Diego CA MSA	1	18		113	132
San Jose CA PMSA	1	15		42	58
Santa Barbara--Santa Mari	1	7		49	57
Santa Rosa--Petaluma CA	1	9		50	60
Sherman--Denison TX MSA	1	16		18	35
Spokane WA MSA	1	11		48	60
Stockton CA MSA	1	7		103	111
Tacoma WA PMSA	1	21		57	79
Topeka KS MSA	1	5	12	25	43
Trenton NJ PMSA	1	5	8	19	33
Tucson AZ MSA	1	5		25	31
Tuscaloosa AL MSA	1	4		14	19
Tyler TX MSA	1	9		7	17
Vineland--Millville--Brid	1	4	10	14	29
Waco TX MSA	1	20		13	34
West Palm Beach--Boca Rat	1	38		41	80

Source: Government Organization, vol. 1, 1997.

Table A-3: Form of County Government and Change in Single Metropolitan Counties, 1970s-2000

MSAs	Form of County Government*, 1970s	Form of County Government*, 2000	Changes in Form of Government**,1970s-2000
Altoona PA MSA	3	3	0
Anaheim--Santa Ana CA PM	1	1	0
Bakersfield CA MSA	1	1	0
Billings MT MSA	3	3	0
Bloomington--Normal IL M	3	2	1
Brownsville--Harlingen T	3	3	0
Bryan--College Station T	3	3	0
Cedar Rapids IA MSA	3	3	0
Champaign--Urbana--Rantou	3	1	1
Colorado Springs CO MSA	3	3	0
Columbia MO MSA	3	3	0
Decatur IL MSA	3	3	0
Dubuque IA MSA	3	3	0
El Paso TX MSA	3	3	0
Erie PA MSA	3	2	1
Eugene--Springfield OR M	1	1	0
Fayetteville NC MSA	1	2	1
Fort Lauderdale--Hollywoo	1	1	0
Gadsden AL MSA	3	3	0
Galveston--Texas City TX	3	3	0
Great Falls MT MSA	3	1	1
Green Bay WI MSA	2	2	0
Hamilton--Middletown OH	1	2	1
Jackson MI MSA	3	2	1
Jersey City NJ PMSA	2	2	0
Kenosha WI PMSA	3	2	1
Lake Charles LA MSA	3	2	1
Lancaster PA MSA	3	2	1
Laredo TX MSA	3	3	0
Lawton OK MSA	3	3	0
Lincoln NE MSA	3	3	0

Los Angeles--Long Beach	1	1	0
Lubbock TX MSA	3	3	0
Madison WI MSA	2	2	0
Mcallen--Edinburg--Missio	3	3	0
Modesto CA MSA	1	1	0
Monroe LA MSA	1	2	1
Muncie IN MSA	3	3	0
Owensboro KY MSA	3	3	0
Oxnard--Ventura CA PMSA	1	1	0
Pine Bluff AR MSA	3	3	0
Poughkeepsie NY MSA	2	2	0
Provo--Orem UT MSA	3	3	0
Pueblo CO MSA	3	3	0
Racine WI PMSA	2	2	0
Reading PA MSA	3	3	0
Reno NV MSA	1	1	0
Rochester MN MSA	1	1	0
Salinas--Seaside--Montere	1	2	1
San Angelo TX MSA	3	3	0
San Diego CA MSA	1	1	0
San Jose CA PMSA	1	1	0
Santa Barbara--Santa Mari	1	1	0
Santa Rosa--Petaluma CA	1	1	0
Sherman--Denison TX MSA	3	3	0
Spokane WA MSA	3	2	1
Stockton CA MSA	1	2	1
Tacoma WA PMSA	1	3	1
Topeka KS MSA	3	3	0
Trenton NJ PMSA	2	2	0
Tucson AZ MSA	1	1	0
Tuscaloosa AL MSA	3	3	0
Tyler TX MSA	3	3	0
Vineland--Millville--Brid	1	2	1
Waco TX MSA	3	3	0
West Palm Beach--Boca Rat	1	1	0

Sources: County Year Book, 1975 and The Municipal Year Book, 2003.

*1=Council-Manager; 2=Council-elected executive; 3=Commission

**1=Changed; 0=Not changed

Table A-4: Form of County Government and Change in Single Metropolitan Counties, 1970s-2000

MSAs	Form of County Government*, 1970s	Form of County Government*, 2000	Changes in Form of Government**,1970s-2000
Altoona PA MSA	3	3	0
Anaheim--Santa Ana CA PM	1	1	0
Bakersfield CA MSA	1	1	0
Billings MT MSA	3	3	0
Bloomington--Normal IL M	3	2	1
Brownsville--Harlingen T	3	3	0
Bryan--College Station T	3	3	0
Cedar Rapids IA MSA	3	3	0
Champaign--Urbana--Rantou	3	1	1
Colorado Springs CO MSA	3	3	0
Columbia MO MSA	3	3	0
Decatur IL MSA	3	3	0
Dubuque IA MSA	3	3	0
El Paso TX MSA	3	3	0
Erie PA MSA	3	2	1
Eugene--Springfield OR M	1	1	0
Fayetteville NC MSA	1	2	1
Fort Lauderdale--Hollywoo	1	1	0
Gadsden AL MSA	3	3	0
Galveston--Texas City TX	3	3	0
Great Falls MT MSA	3	1	1
Green Bay WI MSA	2	2	0
Hamilton--Middletown OH	1	2	1
Jackson MI MSA	3	2	1

Jersey City NJ PMSA	2	2	0
Kenosha WI PMSA	3	2	1
Lake Charles LA MSA	3	2	1
Lancaster PA MSA	3	2	1
Laredo TX MSA	3	3	0
Lawton OK MSA	3	3	0
Lincoln NE MSA	3	3	0
Los Angeles--Long Beach	1	1	0
Lubbock TX MSA	3	3	0
Madison WI MSA	2	2	0
Mcallen--Edinburg--Missio	3	3	0
Modesto CA MSA	1	1	0
Monroe LA MSA	1	2	1
Muncie IN MSA	3	3	0
Owensboro KY MSA	3	3	0
Oxnard--Ventura CA PMSA	1	1	0
Pine Bluff AR MSA	3	3	0
Poughkeepsie NY MSA	2	2	0
Provo--Orem UT MSA	3	3	0
Pueblo CO MSA	3	3	0
Racine WI PMSA	2	2	0
Reading PA MSA	3	3	0
Reno NV MSA	1	1	0
Rochester MN MSA	1	1	0
Salinas--Seaside--Montere	1	2	1
San Angelo TX MSA	3	3	0
San Diego CA MSA	1	1	0
San Jose CA PMSA	1	1	0
Santa Barbara--Santa Mari	1	1	0

Santa Rosa--Petaluma CA	1	1	0
Sherman--Denison TX MSA	3	3	0
Spokane WA MSA	3	2	1
Stockton CA MSA	1	2	1
Tacoma WA PMSA	1	3	1
Topeka KS MSA	3	3	0
Trenton NJ PMSA	2	2	0
Tucson AZ MSA	1	1	0
Tuscaloosa AL MSA	3	3	0
Tyler TX MSA	3	3	0
Vineland--Millville--Brid	1	2	1
Waco TX MSA	3	3	0
West Palm Beach--Boca Rat	1	1	0

Sources: County Year Book, 1975 and The Municipal Year Book, 2003.
*1=Council-manager; 2=Council-elected Executive; 3=Commission
**1=Changed; 0=Not changed

Table A-5: Property Tax Revenue in the United States, 1927-2002

Year	% of Property Tax to Total Tax Revenue	% of Property Tax to Total Local Government Revenue
1927	97.3	68.8
1932	97.3	67.2
1940	92.7	54.0
1946	91.9	49.5
1950	88.2	43.7
1955	86.9	42.7
1960	87.4	42.3
1965	86.9	40.8
1966	87.4	40.2
1967	86.6	39.0
1968	86.1	38.2
1969	85.4	37.5
1970	84.9	37.0
1971	84.6	36.4
1972	83.7	36.2
1973	82.9	34.0
1974	82.2	32.4
1975	81.6	31.3
1976	81.2	30.8
1977	80.5	30.7
1978	79.9	29.9
1979	77.5	26.6
1980	75.9	25.4
1981	76.0	25.0
1982	76.1	25.0
1983	76.0	25.4
1984	75.0	25.3
1985	74.2	24.8
1986	74.0	24.7
1987	73.6	24.7
1988	74.1	25.7
1989	74.3	25.8

1990	74.5	25.8
1991	75.3	26.4
1992	75.6	26.5
1993	75.7	26.7
1994	74.8	26.2
1995	74.2	25.6
1996	73.7	24.8
1997	73.3	24.6
1998	72.9	24.1
1999	72.3	23.9
2000	71.6	23.5
2001	71.5	23.7
2002	72.9	24.9

Sources: Ladd, 1998; 2002 Census of Governments, Government Finances, Table 1.

Table A-6: Local Government Expenditure by Function in the United States, 1991/92-2001/02 (in Mil.)

	County					Municipality					Special Districts				
	2001/02	1991/92	% Change	% to Total 01/02	% to Total 91/92	2001/02	1991/92	% Change	% to Total 01/02	% to Total 91/92	2001/02	1991/92	% Change	% to Total 01/02	% to Total 91/92
Government Administration															
Financial admin	6,086	3,861	57.6			6,649	4,259	56.1							
Judicial and legal	13,079	7,598	72.1			3,712	2,403	54.5							
General public building	3,780	2,435	55.2			3,795	1,941	95.5							
Other govt admin	5,785	3,116	85.7			7,287	3,937	85.1							
Sub Total	28,730	17,010	68.9	15.6	15.5	21,443	12,540	71.0	10.5	10.0					
Social Service and Income Maintenance															
Public Welfare	33,533	23,249	44.2			12,904	9,574	34.8							
Hospitals	23,086	15,543	48.5			10,012	7,581	32.1			17,767	10,749	65.3		
Health	21,418	10,378	106.4			5,940	2,909	104.2			2,453	607	304.1		
Sub Total	78,037	49,170	58.7	42.3	44.7	28,856	20,064	43.8	14.1	16	20,220	11,356	78.1	33.9	35.5
Transportation															
Highway	16,394	10,337	58.6			22,132	13,350	65.8			2,144	658	225.8		
Air Transportation	2,799	1,713	63.4			6,978	3,590	94.4			5,296	2,054	157.8		
Transit subsidies	532	553	-3.8			1,575	1,050	50							
Other transportation	290	211	37.4			2,173	1,128	92.6							
Parking Facilities											52	134	-61.2		
Water Transport and Terminals											1,152	816	41.2		
Sub Total	20,015	12,814	56.2	10.8	11.6	32,858	19,118	71.9	16.1	15.2	8,644	3,662	136	14.5	11.4

Public Safety															
Police protection	16,019	8,155	96.4			36,910	20,946	76.2							
Fire protection	3,662	1,910	91.7			17,790	10,622	67.5			3,127	1,350	131.6		
Correction	15,375	8,389	83.3			3,118	2,191	42.3							
Protective inspection and regulation	974	458	112.7			2,497	1,590	57							
Sub Total	36,030	18,912	90.5	19.5	17.2	60,315	35,349	70.6	29.5	28.2	3,127	1,350	131.6	5.2	4.2
Environment and Housing															
Natural resources	2,569	1,562	64.5			355	196	81.1			2,463	1,169	110.7		
parks and recreation	5,535	2,810	97			15,606	8,418	85.4			3,267	1,624	101.2		
Housing and community development	2,848	1,269	124.4			12,563	8,632	45.5			12,397	6,025	105.8		
Sewerage	4,449	2,406	84.9			19,322	12,425	55.5			6,276	5,375	16.8		
Solid Waste Management	4,302	2,711	58.7			9,674	6,605	46.5			1,177	724	62.6		
Sub Total	19,703	10,758	83.1	10.7	9.8	57,520	36,276	58.6	28.1	28.9	25,580	14,917	71.5	42.9	46.6
Educational															
Library	2,125	1,373	54.8	1.2	1.2	3,359	2,167	55	1.6	10	2,082	710	193.2	3.5	2.2
Total	184,640	110,037	67.8			204,351	125,514	62.8			59,653	31,995	86.4		

Sources:
1) 2002 Census of Governments, vol. 4, no. 2, Table 1, Finances of Special District Governments.
2) 2002 Census of Governments, vol. 4, no. 3, Table 1, Finances of County Governments.
3) 2002 Census of Governments, vol. 4, no. 4, Table 1, Finances of Municipal and Township Governments.

Table A-7: MPDI for Single Metropolitan Counties, 1972-1992

		1972 MPDI				1992 MPDI			
Fips	Areas	County	Municipality	Special District	Total	County	Municipality	Special District	Total
280	Altoona PA MSA	0.55	2.53	0.43	3.51	0.62	2.40	1.21	4.23
360	Anaheim--Santa Ana CA PM	0.62	3.15	1.28	5.06	0.62	3.09	1.67	5.38
680	Bakersfield CA MSA	0.80	1.07	2.42	4.29	0.77	1.07	2.70	4.54
880	Billings MT MSA	0.58	1.00	0.34	1.92	0.59	0.99	0.47	2.05
1040	Bloomington--Normal IL M	0.54	3.20	0.64	4.38	0.51	3.18	1.32	5.01
1240	Brownsville--Harlingen T	0.43	1.81	1.51	3.75	0.39	2.17	0.85	3.41
1260	Bryan--College Station T	0.31	1.28	0.13	1.72	0.38	1.27	0.40	2.06
1360	Cedar Rapids IA MSA	0.57	1.69	0.05	2.31	0.56	1.74	0.05	2.35
1400	Champaign--Urbana--Rantou	0.41	3.11	1.11	4.64	0.42	3.25	1.34	5.02
1720	Colorado Springs CO MSA	0.60	1.29	0.56	2.44	0.57	1.30	0.82	2.70
1740	Columbia MO MSA	0.65	1.00	0.54	2.18	0.38	1.26	0.79	2.43
2040	Decatur IL MSA	0.50	2.24	0.90	3.64	0.49	2.21	1.57	4.27
2200	Dubuque IA MSA	0.61	1.50	0.02	2.14	0.55	1.62	0.17	2.34
2320	El Paso TX MSA	0.33	0.84	0.71	1.88	0.59	0.93	0.52	2.04
2360	Erie PA MSA	0.50	2.97	0.50	3.98	0.66	2.64	1.03	4.32
2400	Eugene--Springfield OR M	0.57	1.48	0.67	2.72	0.48	1.49	1.10	3.08
2560	Fayetteville NC MSA	0.65	1.00	0.01	1.66	0.73	0.92	0.17	1.82
2680	Fort Lauderdale--Hollywoo	0.41	2.81	0.94	4.16	0.51	2.88	1.18	4.57
2880	Gadsden AL MSA	0.40	1.57	0.60	2.56	0.43	1.91	0.61	2.95
2920	Galveston--Texas City TX	0.67	1.52	0.43	2.63	0.60	1.83	1.34	3.77
3040	Great Falls MT MSA	0.68	0.86	0.21	1.75	0.63	0.88	0.61	2.12
3080	Green Bay WI MSA	0.64	2.21	0.16	3.01	0.63	2.08	0.51	3.21
3200	Hamilton--Middletown OH	0.48	2.43	0.10	3.02	0.59	2.14	0.13	2.86
3520	Jackson MI MSA	0.69	2.16	0.02	2.87	0.77	2.03	0.15	2.95
3640	Jersey City NJ PMSA	0.54	2.19	0.67	3.40	0.59	2.33	0.45	3.37
3800	Kenosha WI PMSA	0.63	1.64	0.00	2.28	0.70	1.62	0.19	2.51

3960	Lake Charles LA MSA	0.68	1.28	0.74	2.69	0.76	1.34	0.11	2.21
4000	Lancaster PA MSA	0.54	4.57	0.51	5.62	0.58	4.37	1.81	6.76
4080	Laredo TX MSA	0.44	0.87	0.29	1.60	0.53	0.98	0.16	1.68
4200	Lawton OK MSA	0.73	1.01	0.24	1.98	0.89	0.89	0.21	1.99
4360	Lincoln NE MSA	0.40	1.16	0.13	1.70	0.39	1.12	0.65	2.17
4480	Los Angeles--Long Beach	0.69	3.55	1.07	5.31	0.67	3.77	1.61	6.06
4600	Lubbock TX MSA	0.37	1.18	0.16	1.71	0.63	1.02	0.38	2.03
4720	Madison WI MSA	0.57	3.28	0.29	4.14	0.54	2.96	0.82	4.32
4880	Mcallen--Edinburg--Missio	0.40	2.40	1.65	4.45	0.44	2.32	1.41	4.16
5170	Modesto CA MSA	0.69	0.99	2.13	3.82	0.67	1.00	1.91	3.58
5200	Monroe LA MSA	0.45	1.20	0.14	1.78	0.61	1.15	Null.	1.75
5280	Muncie IN MSA	0.64	1.52	0.30	2.47	0.61	1.51	0.46	2.59
5990	Owensboro KY MSA	0.29	0.98	0.12	1.38	0.31	0.99	0.14	1.44
6000	Oxnard--Ventura CA PMSA	0.77	1.45	1.23	3.45	0.72	1.61	1.42	3.75
6240	Pine Bluff AR MSA	0.55	1.14	0.21	1.89	0.52	1.15	0.29	1.95
6460	Poughkeepsie NY MSA	0.60	3.26	0.36	4.22	0.76	2.87	0.59	4.22
6520	Provo--Orem UT MSA	0.37	2.82	0.14	3.33	0.40	2.73	0.71	3.84
6560	Pueblo CO MSA	0.59	0.83	0.31	1.74	0.69	0.68	0.85	2.22
6600	Racine WI PMSA	0.62	2.18	0.00	2.79	0.60	2.07	0.12	2.79
6680	Reading PA MSA	0.54	4.74	0.79	6.07	0.65	4.52	1.46	6.63
6720	Reno NV MSA	0.77	0.84	0.32	1.93	0.70	0.89	0.66	2.26
6820	Rochester MN MSA	0.64	1.64	0.02	2.30	0.54	1.38	0.13	2.06
7120	Salinas--Seaside--Montere	0.75	1.48	1.24	3.46	0.71	1.35	2.09	4.16
7200	San Angelo TX MSA	0.45	0.89	0.07	1.41	0.49	0.85	0.27	1.61
7320	San Diego CA MSA	0.61	1.73	2.03	4.37	0.65	1.88	2.31	4.85
7400	San Jose CA PMSA	0.69	2.02	0.66	3.37	0.70	1.96	0.74	3.40
7480	Santa Barbara--Santa Mari	0.76	1.06	1.27	3.08	0.76	1.13	1.63	3.52
7500	Santa Rosa--Petaluma CA	0.77	1.32	0.91	3.00	0.77	1.26	1.05	3.09
7640	Sherman--Denison TX MSA	0.45	1.70	0.84	2.98	0.40	1.83	1.24	3.46
7840	Spokane WA MSA	0.54	1.30	0.71	2.55	0.54	1.23	1.43	3.20
8120	Stockton CA MSA	0.77	1.06	1.62	3.45	0.80	1.15	1.25	3.20
8200	Tacoma WA	0.47	1.80	0.83	3.10	0.50	1.77	1.36	3.62

	PMSA								
8440	Topeka KS MSA	0.89	2.09	0.63	3.62	0.79	2.56	1.06	4.41
8480	Trenton NJ PMSA	0.52	2.27	0.70	3.49	0.54	2.24	0.81	3.60
8520	Tucson AZ MSA	0.63	0.88	0.06	1.56	0.71	0.92	0.47	2.10
8600	Tuscaloosa AL MSA	0.39	1.08	0.15	1.62	0.31	0.64	1.35	2.30
8640	Tyler TX MSA	0.53	1.29	0.06	1.88	0.58	1.29	0.43	2.30
8760	Vineland--Millville--Brid	0.55	2.05	0.24	2.84	0.60	2.09	0.44	3.13
8800	Waco TX MSA	0.40	1.83	0.28	2.51	0.44	2.08	0.94	3.46
8960	West Palm Beach--Boca Rat	0.49	3.08	1.20	4.77	0.63	3.17	0.93	4.73

Source: Miller's MPDI Database.

Table A-8: Local Government Service Shares in 1992 and Percentage Change*, 1972-1992 and Number of Local Governments in 1997 and Percentage Change, 1972-1997

	County		Municipality		Special District		No. of Government	
	Share	%Change	Share	%Change	Share	%Change	1997	%Change
Altoona PA MSA	0.15	-6.3	0.57	-21.2	0.29	131.8	51	-10.5
Anaheim--Santa Ana CA PM	0.12	-5.7	0.57	-8.0	0.31	22.4	118	53.3
Bakersfield CA MSA	0.17	-9.5	0.24	-5.3	0.59	5.5	117	30.0
Billings MT MSA	0.29	-4.3	0.48	-7.3	0.23	28.7	38	40.7
Bloomington--Normal IL M	0.10	-17.8	0.63	-13.2	0.26	81.2	120	18.8
Brownsville--Harlingen T	0.12	0.3	0.63	31.8	0.25	-38.1	54	5.9
Bryan--College Station T	0.19	4.1	0.62	-17.3	0.20	165.1	12	100.0
Cedar Rapids IA MSA	0.24	-4.5	0.74	1.6	0.02	-0.4	28	3.7
Champaign--Urbana--Rantou	0.08	-6.0	0.65	-3.3	0.27	11.5	161	12.6
Colorado Springs CO MSA	0.21	-12.7	0.48	-9.0	0.31	34.4	71	51.1
Columbia MO MSA	0.16	-46.6	0.52	13.5	0.32	30.7	25	78.6
Decatur IL MSA	0.12	-16.0	0.52	-16.0	0.37	48.7	81	6.6
Dubuque IA MSA	0.24	-17.3	0.69	-1.6	0.07	518.8	26	8.3
El Paso TX MSA	0.29	66.3	0.45	1.7	0.25	-32.6	26	136.4
Erie PA MSA	0.15	20.4	0.61	-18.3	0.24	88.0	91	19.7
Eugene--Springfield OR M	0.16	-25.3	0.49	-10.9	0.36	45.9	68	15.3
Fayetteville NC MSA	0.40	2.7	0.50	-16.4	0.09	1712.2	13	18.2
Fort Lauderdale--Hollywoo	0.11	11.4	0.63	-6.5	0.26	14.4	64	45.5
Gadsden AL MSA	0.14	-7.5	0.65	6.0	0.21	-10.8	24	41.2
Galveston--Texas City TX	0.16	-38.2	0.49	-16.4	0.36	117.7	53	89.3
Great Falls MT MSA	0.30	-23.3	0.41	-15.8	0.29	142.7	27	200.0
Green Bay WI MSA	0.20	-7.9	0.65	-11.8	0.16	189.2	48	65.5
Hamilton--Middletown OH	0.20	28.1	0.75	-7.1	0.05	34.4	17	-41.4

Jackson MI MSA	0.26	8.3	0.69	-8.8	0.05	802.3	29	3.6
Jersey City NJ PMSA	0.18	10.6	0.69	7.3	0.13	-32.0	15	-51.6
Kenosha WI PMSA	0.28	0.3	0.64	-10.7	0.08	370.6	23	64.3
Lake Charles LA MSA	0.34	36.4	0.61	28.3	0.05	-81.8	11	-68.6
Lancaster PA MSA	0.09	-11.1	0.65	-20.4	0.27	193.6	122	0.8
Laredo TX MSA	0.32	16.0	0.59	7.1	0.10	-46.2	7	40.0
Lawton OK MSA	0.45	20.8	0.45	-12.5	0.11	-11.2	20	5.3
Lincoln NE MSA	0.18	-22.9	0.52	-24.7	0.30	285.8	37	19.4
Los Angeles--Long Beach	0.11	-14.0	0.62	-6.8	0.27	31.6	285	106.5
Lubbock TX MSA	0.31	43.8	0.50	-27.4	0.19	105.2	16	23.1
Madison WI MSA	0.12	-10.2	0.69	-13.5	0.19	174.3	86	26.5
Mcallen--Edinburg--Missio	0.11	18.1	0.56	3.3	0.34	-9.2	61	27.1
Modesto CA MSA	0.19	3.7	0.28	7.2	0.53	-4.5	74	-5.1
Monroe LA MSA	0.35	37.9	0.65	-2.5	Null	.	5	-50.0
Muncie IN MSA	0.24	-8.7	0.58	-5.5	0.18	45.8	35	12.9
Owensboro KY MSA	0.22	4.1	0.69	-3.0	0.10	15.1	6	-14.3
Oxnard--Ventura CA PMSA	0.19	-14.1	0.43	2.2	0.38	6.3	66	22.2
Pine Bluff AR MSA	0.26	-8.3	0.59	-2.5	0.15	35.8	35	52.2
Poughkeepsie NY MSA	0.18	26.2	0.68	-11.8	0.14	62.0	60	9.1
Provo--Orem UT MSA	0.11	-5.1	0.71	-16.2	0.18	341.7	52	62.5
Pueblo CO MSA	0.31	-9.7	0.31	-36.0	0.38	114.3	31	40.9
Racine WI PMSA	0.21	-2.9	0.74	-4.6	0.04	1900.0	40	42.9
Reading PA MSA	0.10	10.5	0.68	-12.8	0.22	69.7	136	-11.1
Reno NV MSA	0.31	-22.2	0.39	-9.2	0.29	77.7	21	61.5
Rochester MN MSA	0.26	-5.5	0.67	-5.9	0.06	798.7	27	3.9
Salinas--Seaside--Montere	0.17	-20.4	0.33	-23.6	0.50	40.3	72	18.0
San Angelo TX MSA	0.31	-4.3	0.53	-15.9	0.16	222.6	12	100.0
San Diego CA MSA	0.13	-3.5	0.39	-1.8	0.48	2.6	132	26.9
San Jose CA PMSA	0.20	0.7	0.58	-3.8	0.22	10.7	58	52.6

Santa Barbara--Santa Mari	0.21	-12.8	0.32	-6.4	0.46	13.1	57	26.7
Santa Rosa--Petaluma CA	0.25	-3.3	0.41	-6.7	0.34	12.4	60	11.1
Sherman--Denison TX MSA	0.11	-23.5	0.53	-7.3	0.36	27.4	35	12.9
Spokane WA MSA	0.17	-21.3	0.38	-24.7	0.45	61.9	60	-24.1
Stockton CA MSA	0.25	12.0	0.36	16.9	0.39	-16.8	111	1.8
Tacoma WA PMSA	0.14	-8.4	0.49	-16.0	0.37	39.3	79	27.4
Topeka KS MSA	0.18	-27.7	0.58	0.4	0.24	37.6	43	13.2
Trenton NJ PMSA	0.15	0.9	0.62	-4.1	0.23	12.6	33	6.5
Tucson AZ MSA	0.34	-15.9	0.44	-21.8	0.22	496.9	31	416.7
Tuscaloosa AL MSA	0.14	-43.4	0.28	-58.4	0.59	531.5	19	171.4
Tyler TX MSA	0.25	-10.5	0.56	-18.1	0.19	445.2	17	70.0
Vineland--Millville--Brid	0.19	-0.9	0.67	-7.7	0.14	68.3	29	11.5
Waco TX MSA	0.13	-20.0	0.60	-17.5	0.27	141.0	34	36.0
West Palm Beach--Boca Rat	0.13	29.8	0.67	3.9	0.20	-22.0	80	9.6

Source: Miller's MPDI Database with author's calculation.
*Used 1977 and 1992 data for changes for Kenosha and Racine, WI.

Table A-9: Fiscal Condition in Single Metropolitan Counties, 1997

MSAs	Per Capita Expenditure, 1997	Per Capita Property Tax, 1997
Altoona PA MSA	1,849	430
Anaheim--Santa Ana CA PM	2,615	637
Bakersfield CA MSA	3,336	618
Billings MT MSA	1,948	613
Bloomington--Normal IL M	1,931	903
Brownsville--Harlingen T	2,161	367
Bryan--College Station T	2,060	712
Cedar Rapids IA MSA	2,480	924
Champaign--Urbana--Rantou	2,099	780
Colorado Springs CO MSA	2,385	492
Columbia MO MSA	1,775	424
Decatur IL MSA	2,316	658
Dubuque IA MSA	2,175	688
El Paso TX MSA	2,200	557
Erie PA MSA	2,352	598
Eugene--Springfield OR M	2,810	689
Fayetteville NC MSA	2,627	407
Fort Lauderdale--Hollywoo	3,161	921
Gadsden AL MSA	1,698	152
Galveston--Texas City TX	2,900	1,437
Great Falls MT MSA	1,843	514
Green Bay WI MSA	3,041	946
Hamilton--Middletown OH	2,096	645
Jackson MI MSA	2,552	432
Jersey City NJ PMSA	2,821	1,191
Kenosha WI PMSA	3,179	1,108
Lake Charles LA MSA	2,548	449
Lancaster PA MSA	2,217	677
Laredo TX MSA	2,811	543
Lawton OK MSA	2,278	208
Lincoln NE MSA	2,525	924
Los Angeles--Long Beach	3,482	573

Lubbock TX MSA	2,461	586
Madison WI MSA	3,283	1,306
Mcallen--Edinburg--Missio	2,172	421
Modesto CA MSA	3,067	412
Monroe LA MSA	2,036	353
Muncie IN MSA	1,816	670
Owensboro KY MSA	2,050	299
Oxnard--Ventura CA PMSA	2,867	668
Pine Bluff AR MSA	1,835	343
Poughkeepsie NY MSA	3,359	1,391
Provo--Orem UT MSA	1,805	405
Pueblo CO MSA	2,249	517
Racine WI PMSA	2,584	814
Reading PA MSA	2,560	880
Reno NV MSA	2,869	668
Rochester MN MSA	2,927	812
Salinas--Seaside--Montere	4,016	585
San Angelo TX MSA	1,786	553
San Diego CA MSA	3,088	544
San Jose CA PMSA	3,341	826
Santa Barbara--Santa Mari	3,022	672
Santa Rosa--Petaluma CA	3,166	665
Sherman--Denison TX MSA	2,265	680
Spokane WA MSA	2,287	456
Stockton CA MSA	3,139	458
Tacoma WA PMSA	2,510	551
Topeka KS MSA	2,540	836
Trenton NJ PMSA	3,641	1,678
Tucson AZ MSA	2,598	654
Tuscaloosa AL MSA	2,682	206
Tyler TX MSA	1,768	601
Vineland--Millville--Brid	3,134	853
Waco TX MSA	2,914	575
West Palm Beach--Boca Rat	2,997	1,256

Source: County and City Extra, 2002.

Table A-10: Demography in 2000 with Percentage Change in Single Metropolitan Counties, 1970-2000

MSAs	Population	% Change	Land (Sq. Km.)	%Change	Density	% Change
Altoona PA MSA	129,144	-4.7	1,362	-0.8	94.8	-3.9
Anaheim--Santa Ana CA PM	2,846,289	98.7	2,045	0.9	1391.8	96.8
Bakersfield CA MSA	661,645	100.0	21,085	-0.2	31.4	100.3
Billings MT MSA	129,352	47.3	6,825	-0.3	19.0	47.7
Bloomington--Normal IL M	150,433	43.2	3,065	0.9	49.1	42.0
Brownsville--Harlingen TX	335,227	137.4	2,346	1.1	142.9	134.9
Bryan--College Station TX	152,415	162.4	1,517	-0.1	100.5	162.6
Cedar Rapids IA MSA	191,701	17.3	1,858	0.0	103.2	17.3
Champaign--Urbana--Rantou	179,669	10.0	2,582	-0.3	69.6	10.4
Colorado Springs CO MSA	516,929	117.1	5,507	-21.6	93.9	176.7
Columbia MO MSA	135,454	67.1	1,775	0.0	76.3	67.0
Decatur IL MSA	114,706	-8.2	1,504	0.4	76.3	-8.6
Dubuque IA MSA	89,143	-1.8	1,575	-0.7	56.6	-1.2
El Paso TX MSA	679,622	88.5	2,624	-4.2	259.0	96.8
Erie PA MSA	280,843	6.3	2,077	-1.4	135.2	7.8
Eugene--Springfield OR M	322,959	49.2	11,795	0.0	27.4	49.2
Fayetteville NC MSA	302,963	43.0	1,691	-0.2	179.2	43.2
Fort Lauderdale--Hollywoo	1,623,018	158.5	3,122	-1.1	519.9	161.5
Gadsden AL MSA	103,459	9.9	1,385	-3.7	74.7	14.1
Galveston--Texas City TX	250,158	46.8	1,032	-0.2	242.4	47.0
Great Falls MT MSA	80,357	-2.3	6,988	1.4	11.5	-3.6
Green Bay WI MSA	226,778	42.6	1,369	0.9	165.7	41.4
Hamilton--Middletown OH	332,807	46.7	1,210	-0.8	275.1	47.9
Jackson MI MSA	158,422	10.6	1,830	1.2	86.6	9.3
Jersey City NJ PMSA	608,975	0.4	121	-0.6	5032.9	1.0
Kenosha WI PMSA	149,577	26.7	707	0.3	211.6	26.2
Lake Charles LA MSA	183,577	26.4	2,774	-3.1	66.2	30.4
Lancaster PA MSA	470,658	46.5	2,458	0.3	191.5	46.1
Laredo TX MSA	193,117	162.6	8,694	1.5	22.2	158.7
Lawton OK MSA	114,996	6.5	2,770	-1.4	41.5	7.9
Lincoln NE MSA	250,291	48.3	2,173	-0.7	115.2	49.4

Los Angeles--Long Beach	9,519,338	35.2	10,518	-0.2	905.1	35.5
Lubbock TX MSA	242,628	34.6	2,330	0.7	104.1	33.6
Madison WI MSA	426,526	46.5	3,113	0.3	137.0	46.1
Mcallen--Edinburg--Missio	569,463	211.1	4,066	1.7	140.1	205.9
Modesto CA MSA	446,997	128.6	3,869	-1.2	115.5	131.2
Monroe LA MSA	147,250	27.5	1,581	-4.4	93.1	33.3
Muncie IN MSA	118,769	-8.2	1,019	-0.7	116.6	-7.6
Owensboro KY MSA	91,545	15.1	1,198	0.1	76.4	15.0
Oxnard--Ventura CA PMSA	753,197	97.6	4,779	-1.0	157.6	99.6
Pine Bluff AR MSA	84,278	-0.9	2,292	1.3	36.8	-2.2
Poughkeepsie NY MSA	280,150	25.3	2,076	-1.4	135.0	27.2
Provo--Orem UT MSA	368,536	165.0	5,176	-0.8	71.2	167.2
Pueblo CO MSA	141,472	19.3	6,187	-0.7	22.9	20.2
Racine WI PMSA	188,831	10.5	863	-1.2	218.8	11.8
Reading PA MSA	373,638	25.9	2,224	-0.4	168.0	26.4
Reno NV MSA	339,486	177.9	16,426	-0.4	20.7	179.1
Rochester MN MSA	124,277	47.3	1,691	-0.5	73.5	48.1
Salinas--Seaside--Montere	401,762	61.9	8,604	-0.1	46.7	62.0
San Angelo TX MSA	104,010	45.9	3,942	1.4	26.4	43.9
San Diego CA MSA	2,813,833	106.0	10,878	-1.5	258.7	109.0
San Jose CA PMSA	1,682,585	57.0	3,343	-0.7	503.3	58.2
Santa Barbara--Santa Mari	399,347	50.5	7,089	0.0	56.3	50.6
Santa Rosa--Petaluma CA	458,614	122.6	4,082	-1.8	112.4	126.6
Sherman--Denison TX MSA	110,595	33.8	2,418	-0.7	45.7	34.8
Spokane WA MSA	417,939	44.6	4,568	0.3	91.5	44.1
Stockton CA MSA	563,598	93.4	3,624	-0.9	155.5	95.2
Tacoma WA PMSA	700,820	69.8	4,348	0.1	161.2	69.6
Topeka KS MSA	169,871	9.2	1,424	-68.9	119.3	250.7
Trenton NJ PMSA	350,761	15.0	585	-1.0	599.6	16.1
Tucson AZ MSA	843,746	137.0	23,792	-0.6	35.5	138.5
Tuscaloosa AL MSA	164,875	41.6	3,430	-0.7	48.1	42.6
Tyler TX MSA	174,706	79.4	2,405	-0.6	72.6	80.5
Vineland--Millville--Brid	146,438	19.7	1,267	-2.2	115.6	22.4
Waco TX MSA	213,517	44.5	2,698	4.1	79.1	38.8
West Palm Beach--Boca Rat	1,131,184	221.0	5,113	-2.4	221.2	229.0

Sources:

1) 1970 population from "www.bea.gov/bea/regional/data.htm" and 2000 population from "www.census.gov."

2) Land size from "City and County Data Book," 1977 and "County and City Extra," 2002.

Table A-11: Property Tax Generating Effort* and Percentage Change in Single Metropolitan Counties, 1970-2000

MSAs	Property Tax Generating Effort, 1970	Property Tax Generating Effort, 2000	% Change
Altoona PA MSA	0.025	0.018	-28.0
Anaheim--Santa Ana CA PM	0.061	0.017	-72.1
Bakersfield CA MSA	0.086	0.030	-65.1
Billings MT MSA	0.062	0.023	-62.9
Bloomington--Normal IL M	0.053	0.031	-41.5
Brownsville--Harlingen T	0.044	0.025	-43.2
Bryan--College Station T	0.031	0.036	16.1
Cedar Rapids IA MSA	0.069	0.029	-58.0
Champaign--Urbana--Rantou	0.032	0.031	-3.1
Colorado Springs CO MSA	0.048	0.017	-64.6
Columbia MO MSA	0.042	0.016	-61.9
Decatur IL MSA	0.042	0.024	-42.9
Dubuque IA MSA	0.056	0.027	-51.8
El Paso TX MSA	0.044	0.030	-31.8
Erie PA MSA	0.039	0.024	-38.5
Eugene--Springfield OR M	0.072	0.027	-62.5
Fayetteville NC MSA	0.018	0.017	-5.6
Fort Lauderdale--Hollywoo	0.035	0.030	-14.3
Gadsden AL MSA	0.013	0.007	-46.2
Galveston--Texas City TX	0.066	0.049	-25.8
Great Falls MT MSA	0.057	0.021	-63.2
Green Bay WI MSA	0.067	0.032	-52.2

Hamilton--Middletown OH	0.045	0.023	-48.9
Jackson MI MSA	0.046	0.017	-63.0
Jersey City NJ PMSA	0.064	0.041	-35.9
Kenosha WI PMSA	0.068	0.040	-41.2
Lake Charles LA MSA	0.038	0.020	-47.4
Lancaster PA MSA	0.029	0.024	-17.2
Laredo TX MSA	0.038	0.036	-5.3
Lawton OK MSA	0.018	0.010	-44.4
Lincoln NE MSA	0.060	0.032	-46.7
Los Angeles--Long Beach	0.068	0.020	-70.6
Lubbock TX MSA	0.035	0.024	-31.4
Madison WI MSA	0.059	0.039	-33.9
Mcallen--Edinburg--Missio	0.051	0.031	-39.2
Modesto CA MSA	0.070	0.018	-74.3
Monroe LA MSA	0.027	0.015	-44.4
Muncie IN MSA	0.055	0.027	-50.9
Owensboro KY MSA	0.026	0.012	-53.8
Oxnard--Ventura CA PMSA	0.078	0.020	-74.4
Pine Bluff AR MSA	0.028	0.017	-39.3
Poughkeepsie NY MSA	0.061	0.044	-27.9
Provo--Orem UT MSA	0.036	0.021	-41.7
Pueblo CO MSA	0.056	0.022	-60.7
Racine WI PMSA	0.060	0.028	-53.3
Reading PA MSA	0.034	0.031	-8.8
Reno NV MSA	0.038	0.019	-50.0
Rochester MN MSA	0.066	0.025	-62.1
Salinas--Seaside--Montere	0.053	0.019	-64.2
San Angelo TX MSA	0.033	0.023	-30.3
San Diego CA MSA	0.056	0.017	-69.6

San Jose CA PMSA	0.069	0.015	-78.3
Santa Barbara--Santa Mari	0.065	0.021	-67.7
Santa Rosa--Petaluma CA	0.067	0.018	-73.1
Sherman--Denison TX MSA	0.034	0.030	-11.8
Spokane WA MSA	0.030	0.018	-40.0
Stockton CA MSA	0.069	0.019	-72.5
Tacoma WA PMSA	0.032	0.020	-37.5
Topeka KS MSA	0.050	0.030	-40.0
Trenton NJ PMSA	0.060	0.043	-28.3
Tucson AZ MSA	0.055	0.027	-50.9
Tuscaloosa AL MSA	0.012	0.008	-33.3
Tyler TX MSA	0.037	0.021	-43.2
Vineland--Millville--Brid	0.068	0.037	-45.6
Waco TX MSA	0.036	0.025	-30.6
West Palm Beach--Boca Rat	0.052	0.029	-44.2

Sources:

*1) Used 1970 and 2000 income data from "*www.bea.gov/bea/regional/data.htm*."

2) Used 1972 and 1997 per capita property tax data from "City and County Data Book," 1977 and "County and City Extra," 2002.

Table A-12: Expenditure and Expenditure Growth (% change)* from Model 1 Ranked by Expenditure Growth, 1970-2000

Rank	MSA	Expenditure, 1970	Expenditure, 2000	Expenditure Growth (% Change)
1	Bryan--College Station T	329	2,383	624.5
2	Owensboro KY MSA	328	2,358	619.5
3	Kenosha WI PMSA	333	2,396	619.5
4	Columbia MO MSA	339	2,408	609.5
5	Gadsden AL MSA	339	2,394	606.1
6	Galveston--Texas City TX	349	2,465	605.7
7	Monroe LA MSA	336	2,371	605.1
8	Fayetteville NC MSA	342	2,408	604.3
9	Tyler TX MSA	344	2,412	602.0
10	Green Bay WI MSA	352	2,454	597.9
11	Racine WI PMSA	349	2,432	597.2
12	El Paso TX MSA	357	2,487	596.2
13	Vineland--Millville--Brid	347	2,408	594.4
14	Lubbock TX MSA	348	2,416	594.1
15	Dubuque IA MSA	346	2,399	593.1
15	Rochester MN MSA	349	2,408	590.6
17	Tuscaloosa AL MSA	353	2,437	590.2
18	Muncie IN MSA	349	2,410	590.1
19	Pine Bluff AR MSA	352	2,430	589.9
20	San Angelo TX MSA	356	2,431	583.5
21	Jackson MI MSA	354	2,419	583.2
21	Cedar Rapids IA MSA	355	2,422	583.0
21	Hamilton--Middletown OH	354	2,417	582.1
21	Waco TX MSA	360	2,451	581.5
21	Lawton OK MSA	356	2,418	579.9
26	Lincoln NE MSA	361	2,450	578.1
27	Trenton NJ PMSA	365	2,471	577.7
28	Sherman--Denison TX MSA	361	2,436	575.4
28	Fort Lauderdale--Hollywoo	398	2,655	567.6
30	Brownsville--Harlingen T	378	2,492	558.9
31	Altoona PA MSA	374	2,444	553.8

32	Poughkeepsie NY MSA	383	2,492	551.1
33	Lake Charles LA MSA	371	2,410	549.9
34	San Jose CA PMSA	409	2,651	548.3
35	Mcallen--Edinburg--Missio	395	2,561	547.9
35	Provo--Orem UT MSA	394	2,553	547.2
35	Anaheim--Santa Ana CA PM	450	2,905	545.9
38	Great Falls MT MSA	393	2,530	543.8
38	Decatur IL MSA	390	2,496	539.7
40	Pueblo CO MSA	397	2,522	535.1
41	Madison WI MSA	406	2,572	533.6
42	Erie PA MSA	402	2,545	533.5
43	Santa Rosa--Petaluma CA	403	2,550	533.1
44	Oxnard--Ventura CA PMSA	415	2,601	526.4
45	Billings MT MSA	408	2,549	525.4
46	Tacoma WA PMSA	418	2,610	525.0
47	Laredo TX MSA	409	2,546	523.1
48	Topeka KS MSA	393	2,437	520.8
49	West Palm Beach--Boca Rat	435	2,664	512.8
50	Modesto CA MSA	420	2,568	511.8
51	Bloomington--Normal IL M	426	2,601	510.1
51	Santa Barbara--Santa Mari	430	2,609	506.9
53	Colorado Springs CO MSA	430	2,606	505.9
54	Spokane WA MSA	430	2,557	494.0
55	Stockton CA MSA	446	2,638	491.8
56	Lancaster PA MSA	445	2,627	490.8
57	Champaign--Urbana--Rantou	458	2,664	481.1
58	Salinas--Seaside--Montere	460	2,672	480.7
58	Reading PA MSA	468	2,636	462.9
60	Eugene--Springfield OR M	494	2,737	454.0
61	San Diego CA MSA	550	3,004	446.3
62	Reno NV MSA	508	2,772	445.8
63	Jersey City NJ PMSA	559	3,007	437.8
63	Los Angeles--Long Beach	707	3,746	429.6
65	Tucson AZ MSA	593	3,006	406.8
66	Bakersfield CA MSA	630	3,075	388.2

* Based on regressed predicted values.

Table A-13: Expenditure and Expenditure Growth (% change)* from Model 2 Ranked by Percentage Change, 1970-2000

Rank	MSAs	Expenditure, 1970	Expenditure, 2000	Expenditure Growth (% Change)
1	Tuscaloosa AL MSA	184	2,122	1,051.8
2	Gadsden AL MSA	185	2,039	1,004.8
3	Fayetteville NC MSA	210	2,274	980.4
4	Bryan--College Station T	268	2,650	887.6
5	Lawton OK MSA	221	2,127	862.1
6	Owensboro KY MSA	244	2,125	771.4
7	Monroe LA MSA	255	2,207	764.2
8	Altoona PA MSA	269	2,294	752.1
9	Pine Bluff AR MSA	272	2,285	741.5
10	Fort Lauderdale--Hollywoo	333	2,785	737.2
11	Sherman--Denison TX MSA	307	2,544	727.7
12	San Angelo TX MSA	294	2,433	726.8
13	Lubbock TX MSA	303	2,432	702.8
14	Laredo TX MSA	354	2,834	700.4
15	Waco TX MSA	315	2,476	686.7
15	Lancaster PA MSA	330	2,531	667.9
17	Tyler TX MSA	310	2,369	665.0
18	Tacoma WA PMSA	330	2,499	658.1
19	Champaign--Urbana--Rantou	354	2,674	655.1
20	El Paso TX MSA	352	2,627	646.6
21	Provo--Orem UT MSA	333	2,473	642.1
21	Spokane WA MSA	328	2,404	634.0
21	Reading PA MSA	371	2,671	619.2
21	Lake Charles LA MSA	333	2,344	603.7
21	Erie PA MSA	356	2,492	600.7
26	Brownsville--Harlingen T	365	2,483	579.8
27	Decatur IL MSA	363	2,442	573.7
28	Columbia MO MSA	333	2,238	572.1
28	Hamilton--Middletown OH	360	2,388	563.9
30	Reno NV MSA	410	2,696	558.1
31	Mcallen--Edinburg--Missio	414	2,694	551.1

32	Trenton NJ PMSA	439	2,819	542.6
33	Galveston--Texas City TX	462	2,951	539.3
34	Topeka KS MSA	404	2,540	528.2
35	West Palm Beach--Boca Rat	440	2,763	527.8
35	Poughkeepsie NY MSA	460	2,884	527.4
35	Jackson MI MSA	363	2,275	526.2
38	Madison WI MSA	461	2,838	516.0
38	Muncie IN MSA	408	2,468	504.2
40	Bloomington--Normal IL M	441	2,658	502.6
41	Dubuque IA MSA	410	2,456	498.4
42	Lincoln NE MSA	439	2,602	492.4
43	Kenosha WI PMSA	461	2,722	490.4
44	Racine WI PMSA	429	2,498	481.9
45	Colorado Springs CO MSA	418	2,429	481.7
46	Tucson AZ MSA	544	3,134	476.4
47	Pueblo CO MSA	437	2,496	470.7
48	Vineland--Millville--Brid	472	2,664	463.9
49	Great Falls MT MSA	440	2,474	462.9
50	Los Angeles--Long Beach	687	3,829	457.4
51	Jersey City NJ PMSA	539	2,981	453.5
51	Salinas--Seaside--Montere	462	2,557	453.1
53	Green Bay WI MSA	472	2,591	449.4
54	Anaheim--Santa Ana CA PM	492	2,702	449.3
55	San Diego CA MSA	528	2,880	445.0
56	Billings MT MSA	478	2,531	429.7
57	Cedar Rapids IA MSA	481	2,535	427.3
58	Rochester MN MSA	462	2,426	425.7
58	Santa Barbara--Santa Mari	505	2,534	401.4
60	San Jose CA PMSA	513	2,482	383.9
61	Santa Rosa--Petaluma CA	500	2,412	382.3
62	Eugene--Springfield OR M	578	2,786	382.2
63	Modesto CA MSA	524	2,401	358.1
63	Stockton CA MSA	538	2,466	358.0
65	Oxnard--Ventura CA PMSA	562	2,505	345.9
66	Bakersfield CA MSA	731	3,158	332.1

* Based on regressed predicted values.

Table A-14: Expenditure and Expenditure Growth (% change)* from Model 3 Ranked by Percentage Change, 1970-2000

Rank	MSAs	Expenditure, 1970	Expenditure, 2000	Expenditure Growth (% Change)
1	Tuscaloosa AL MSA	189	2,481	1,212.0
2	Fayetteville NC MSA	197	2,179	1,007.3
3	Bryan--College Station T	268	2,732	921.4
4	Gadsden AL MSA	219	2,002	814.2
5	Altoona PA MSA	262	2,330	787.9
6	Lawton OK MSA	227	1,986	775.3
7	San Angelo TX MSA	284	2,404	747.1
8	Lancaster PA MSA	291	2,433	737.2
9	Owensboro KY MSA	247	2,025	721.0
10	Fort Lauderdale--Hollywoo	349	2,860	719.0
11	Waco TX MSA	312	2,545	714.8
12	Lubbock TX MSA	301	2,446	712.5
13	Pine Bluff AR MSA	271	2,190	707.1
14	Tyler TX MSA	296	2,370	701.1
15	Sherman--Denison TX MSA	339	2,717	700.4
15	Provo--Orem UT MSA	308	2,376	670.5
17	Reading PA MSA	328	2,520	668.3
18	Laredo TX MSA	362	2,739	657.3
19	Spokane WA MSA	340	2,570	656.5
20	Champaign--Urbana--Rantou	337	2,511	644.4
21	Tacoma WA PMSA	347	2,575	642.6
21	Erie PA MSA	338	2,420	615.7
21	Galveston--Texas City TX	464	3,179	585.5
21	Decatur IL MSA	371	2,527	581.2
21	Hamilton--Middletown OH	339	2,261	566.9
26	El Paso TX MSA	410	2,734	566.0
27	Reno NV MSA	397	2,633	562.8
28	Poughkeepsie NY MSA	435	2,842	553.4
28	Trenton NJ PMSA	450	2,929	550.9
30	Madison WI MSA	427	2,776	550.2
31	Columbia MO MSA	363	2,351	547.4

32	Lincoln NE MSA	422	2,729	547.2
33	Topeka KS MSA	404	2,589	541.4
34	Jackson MI MSA	335	2,098	525.5
35	Bloomington--Normal IL M	413	2,566	521.6
35	Mcallen--Edinburg--Missio	452	2,803	519.6
35	Kenosha WI PMSA	433	2,678	518.6
38	Dubuque IA MSA	383	2,342	511.8
38	Muncie IN MSA	404	2,460	509.6
40	Lake Charles LA MSA	361	2,200	509.5
41	West Palm Beach--Boca Rat	442	2,695	509.0
42	Brownsville--Harlingen T	414	2,497	502.5
43	Tucson AZ MSA	490	2,948	502.1
44	Pueblo CO MSA	438	2,636	501.2
45	Racine WI PMSA	398	2,341	488.2
46	Vineland--Millville--Brid	457	2,659	481.9
47	Great Falls MT MSA	431	2,500	480.5
48	Colorado Springs CO MSA	421	2,413	472.7
49	Green Bay WI MSA	449	2,552	468.3
50	Salinas--Seaside--Montere	485	2,716	460.2
51	Los Angeles--Long Beach	676	3,764	456.7
51	Jersey City NJ PMSA	540	2,964	448.8
53	Anaheim--Santa Ana CA PM	501	2,742	447.4
54	Rochester MN MSA	429	2,295	434.5
55	San Diego CA MSA	559	2,980	433.0
56	Cedar Rapids IA MSA	451	2,374	427.0
57	Billings MT MSA	474	2,486	424.9
58	Santa Barbara--Santa Mari	544	2,703	396.5
58	Eugene--Springfield OR M	566	2,786	392.3
60	Santa Rosa--Petaluma CA	518	2,475	378.2
61	San Jose CA PMSA	518	2,472	377.1
62	Modesto CA MSA	587	2,638	349.3
63	Oxnard--Ventura CA PMSA	587	2,608	344.0
63	Stockton CA MSA	572	2,492	335.9
65	Bakersfield CA MSA	756	3,230	327.3
66	Monroe LA MSA	255	Null	Null

* Based on regressed predicted values.

Table A-15: Correlations for Per Capita Expenditure of Council-Manager in the Single Metropolitan Counties, 1970

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.240	.325	.074	.559**	.777**	-.087	-.697**	.694**
	Sig. (2-tailed)	.	.282	.140	.743	.007	.000	.700	.000	.000
	N	22	22	22	22	22	22	22	22	22
MSA Pop., 1970	Pearson Correlation	.240	1	.112	.749**	.603**	.158	-.326	.187	-.006
	Sig. (2-tailed)	.282	.	.620	.000	.003	.483	.139	.404	.978
	N	22	22	22	22	22	22	22	22	22
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.325	.112	1	-.221	.090	.235	.340	-.407	.203
	Sig. (2-tailed)	.140	.620	.	.323	.692	.293	.122	.060	.364
	N	22	22	22	22	22	22	22	22	22
MSA Density, 1970	Pearson Correlation	.074	.749**	-.221	1	.417	.055	-.435*	.373	-.123
	Sig. (2-tailed)	.743	.000	.323	.	.054	.806	.043	.088	.586
	N	22	22	22	22	22	22	22	22	22
Total No. of Gov't, 1972	Pearson Correlation	.559**	.603**	.090	.417	1	.485*	-.635**	-.383	.684**
	Sig. (2-tailed)	.007	.003	.692	.054	.	.022	.002	.079	.000
	N	22	22	22	22	22	22	22	22	22
Property Tax Generating Effort, 1970	Pearson Correlation	.777**	.158	.235	.055	.485*	1	-.242	-.428*	.523*
	Sig. (2-tailed)	.000	.483	.293	.806	.022	.	.279	.047	.012
	N	22	22	22	22	22	22	22	22	22
County Service Share, 1972 (%)	Pearson Correlation	-.087	-.326	.340	-.435*	-.635**	-.242	1	-.139	-.387
	Sig. (2-tailed)	.700	.139	.122	.043	.002	.279	.	.537	.075
	N	22	22	22	22	22	22	22	22	22
Municipal Service Share, 1972 (%)	Pearson Correlation	-.697**	.187	-.407	.373	-.383	-.428*	-.139	1	-.859**
	Sig. (2-tailed)	.000	.404	.060	.088	.079	.047	.537	.	.000
	N	22	22	22	22	22	22	22	22	22
Special District Service Share, 1972 (%)	Pearson Correlation	.694**	-.006	.203	-.123	.684**	.523*	-.387	-.859**	1
	Sig. (2-tailed)	.000	.978	.364	.586	.000	.012	.075	.000	.
	N	22	22	22	22	22	22	22	22	22

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-16: Correlations for Per Capita Expenditure of Council-Manager in the Single Metropolitan Counties, 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.426	.086	.213	.271	-.202	-.227	-.086	.222
	Sig. (2-tailed)	.	.088	.743	.411	.293	.436	.381	.744	.391
	N	17	17	17	17	17	17	17	17	17
MSA Pop., 2000	Pearson Correlation	.426	1	.038	.674**	.834**	-.254	-.421	.304	-.079
	Sig. (2-tailed)	.088	.	.883	.003	.000	.325	.092	.235	.763
	N	17	17	17	17	17	17	17	17	17
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.086	.038	1	-.314	-.016	.212	.393	-.487*	.289
	Sig. (2-tailed)	.743	.883	.	.220	.952	.414	.119	.047	.260
	N	17	17	17	17	17	17	17	17	17
MSA Density, 2000	Pearson Correlation	.213	.674**	-.314	1	.518*	-.322	-.503*	.427	-.161
	Sig. (2-tailed)	.411	.003	.220	.	.033	.208	.039	.087	.536
	N	17	17	17	17	17	17	17	17	17
Total No. of Gov't, 1997	Pearson Correlation	.271	.834**	-.016	.518*	1	-.009	-.699**	.241	.149
	Sig. (2-tailed)	.293	.000	.952	.033	.	.974	.002	.351	.567
	N	17	17	17	17	17	17	17	17	17
Property Tax Generating Effort, 2000	Pearson Correlation	-.202	-.254	.212	-.322	-.009	1	-.210	.284	-.179
	Sig. (2-tailed)	.436	.325	.414	.208	.974	.	.419	.270	.492
	N	17	17	17	17	17	17	17	17	17
County Service Share, 1992 (%)	Pearson Correlation	-.227	-.421	.393	-.503*	-.699**	-.210	1	-.374	-.183
	Sig. (2-tailed)	.381	.092	.119	.039	.002	.419	.	.139	.483
	N	17	17	17	17	17	17	17	17	17
Municipal Service Share, 1992 (%)	Pearson Correlation	-.086	.304	-.487*	.427	.241	.284	-.374	1	-.844**
	Sig. (2-tailed)	.744	.235	.047	.087	.351	.270	.139	.	.000
	N	17	17	17	17	17	17	17	17	17
Special District Service Share, 1992 (%)	Pearson Correlation	.222	-.079	.289	-.161	.149	-.179	-.183	-.844**	1
	Sig. (2-tailed)	.391	.763	.260	.536	.567	.492	.483	.000	.
	N	17	17	17	17	17	17	17	17	17

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-17: Correlations for Per Capita Expenditure of Council-elective Executive in the Single Metropolitan Counties, 1970

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.580	.064	.404	.452	-.363	-.860*	-.251	.592
	Sig. (2-tailed)	.	.227	.905	.427	.369	.479	.028	.631	.216
	N	6	6	6	6	6	6	6	6	6
MSA Pop., 1970	Pearson Correlation	.580	1	-.436	.944**	-.078	.027	-.453	-.688	.766
	Sig. (2-tailed)	.227	.	.387	.005	.884	.960	.367	.131	.076
	N	6	6	6	6	6	6	6	6	6
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.064	-.436	1	-.600	.908*	-.285	-.356	.786	-.483
	Sig. (2-tailed)	.905	.387	.	.208	.012	.585	.489	.064	.332
	N	6	6	6	6	6	6	6	6	6
MSA Density, 1970	Pearson Correlation	.404	.944**	-.600	1	-.307	.240	-.167	-.683	.633
	Sig. (2-tailed)	.427	.005	.208	.	.554	.647	.752	.135	.177
	N	6	6	6	6	6	6	6	6	6
Total No. of Gov't, 1972	Pearson Correlation	.452	-.078	.908*	-.307	1	-.445	-.675	.578	-.169
	Sig. (2-tailed)	.369	.884	.012	.554	.	.377	.141	.230	.749
	N	6	6	6	6	6	6	6	6	6
Property Tax Generating Effort, 1970	Pearson Correlation	-.363	.027	-.285	.240	-.445	1	.417	-.277	.038
	Sig. (2-tailed)	.479	.960	.585	.647	.377	.	.411	.596	.942
	N	6	6	6	6	6	6	6	6	6
County Service Share, 1972 (%)	Pearson Correlation	-.860*	-.453	-.356	-.167	-.675	.417	1	.177	-.594
	Sig. (2-tailed)	.028	.367	.489	.752	.141	.411	.	.737	.213
	N	6	6	6	6	6	6	6	6	6
Municipal Service Share, 1972 (%)	Pearson Correlation	-.251	-.688	.786	-.683	.578	-.277	.177	1	-.897*
	Sig. (2-tailed)	.631	.131	.064	.135	.230	.596	.737	.	.015
	N	6	6	6	6	6	6	6	6	6
Special District Service Share, 1972 (%)	Pearson Correlation	.592	.766	-.483	.633	-.169	.038	-.594	-.897*	1
	Sig. (2-tailed)	.216	.076	.332	.177	.749	.942	.213	.015	.
	N	6	6	6	6	6	6	6	6	6

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A--18: Correlations for Per Capita Expenditure of Council-elective Executive in the Single Metropolitan Counties, 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.230	.286	.045	-.017	.471*	-.104	-.302	.252
	Sig. (2-tailed)	.	.343	.236	.854	.945	.042	.672	.208	.314
	N	19	19	19	19	19	19	19	19	18
MSA Pop., 2000	Pearson Correlation	.230	1	.248	.520*	.345	.040	-.342	-.401	.511*
	Sig. (2-tailed)	.343	.	.306	.022	.148	.872	.152	.089	.030
	N	19	19	19	19	19	19	19	19	18
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.286	.248	1	-.327	.452	-.423	-.178	-.771**	.788**
	Sig. (2-tailed)	.236	.306	.	.172	.052	.071	.467	.000	.000
	N	19	19	19	19	19	19	19	19	18
MSA Density, 2000	Pearson Correlation	.045	.520*	-.327	1	-.251	.365	-.113	.185	-.121
	Sig. (2-tailed)	.854	.022	.172	.	.299	.125	.644	.447	.631
	N	19	19	19	19	19	19	19	19	18
Total No. of Gov't, 1997	Pearson Correlation	-.017	.345	.452	-.251	1	-.011	-.675**	-.312	.639**
	Sig. (2-tailed)	.945	.148	.052	.299	.	.964	.002	.194	.004
	N	19	19	19	19	19	19	19	19	18
Property Tax Generating Effort, 2000	Pearson Correlation	.471*	.040	-.423	.365	-.011	1	-.440	.463*	-.259
	Sig. (2-tailed)	.042	.872	.071	.125	.964	.	.059	.046	.300
	N	19	19	19	19	19	19	19	19	18
County Service Share, 1992 (%)	Pearson Correlation	-.104	-.342	-.178	-.113	-.675**	-.440	1	-.102	-.441
	Sig. (2-tailed)	.672	.152	.467	.644	.002	.059	.	.678	.067
	N	19	19	19	19	19	19	19	19	18
Municipal Service Share, 1992 (%)	Pearson Correlation	-.302	-.401	-.771**	.185	-.312	.463*	-.102	1	-.822**
	Sig. (2-tailed)	.208	.089	.000	.447	.194	.046	.678	.	.000
	N	19	19	19	19	19	19	19	19	18
Special District Service Share, 1992 (%)	Pearson Correlation	.252	.511*	.788**	-.121	.639**	-.259	-.441	-.822**	1
	Sig. (2-tailed)	.314	.030	.000	.631	.004	.300	.067	.000	.
	N	18	18	18	18	18	18	18	18	18

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A-19: Correlations for Per Capita Expenditure of Commission in the Single Metropolitan Counties, 1970

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.154	.149	.290	.014	.766**	.213	-.151	-.009
	Sig. (2-tailed)	.	.356	.372	.077	.932	.000	.198	.367	.955
	N	38	38	38	38	38	38	38	38	38
MSA Pop., 1970	Pearson Correlation	.154	1	-.029	.561**	.540**	.009	-.448**	.067	.282
	Sig. (2-tailed)	.356	.	.863	.000	.000	.957	.005	.690	.086
	N	38	38	38	38	38	38	38	38	38
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.149	-.029	1	-.638**	-.103	.112	.297	-.395*	.181
	Sig. (2-tailed)	.372	.863	.	.000	.537	.501	.070	.014	.277
	N	38	38	38	38	38	38	38	38	38
MSA Density, 1970	Pearson Correlation	.290	.561**	-.638**	1	.313	.207	-.316	.314	-.082
	Sig. (2-tailed)	.077	.000	.000	.	.055	.212	.053	.055	.626
	N	38	38	38	38	38	38	38	38	38
Total No. of Gov't, 1972	Pearson Correlation	.014	.540**	-.103	.313	1	-.081	-.650**	.298	.197
	Sig. (2-tailed)	.932	.000	.537	.055	.	.628	.000	.069	.235
	N	38	38	38	38	38	38	38	38	38
Property Tax Generating Effort, 1970	Pearson Correlation	.766**	.009	.112	.207	-.081	1	.261	-.121	-.078
	Sig. (2-tailed)	.000	.957	.501	.212	.628	.	.113	.470	.641
	N	38	38	38	38	38	38	38	38	38
County Service Share, 1972 (%)	Pearson Correlation	.213	-.448**	.297	-.316	-.650**	.261	1	-.436**	-.327*
	Sig. (2-tailed)	.198	.005	.070	.053	.000	.113	.	.006	.045
	N	38	38	38	38	38	38	38	38	38
Municipal Service Share, 1972 (%)	Pearson Correlation	-.151	.067	-.395*	.314	.298	-.121	-.436**	1	-.707**
	Sig. (2-tailed)	.367	.690	.014	.055	.069	.470	.006	.	.000
	N	38	38	38	38	38	38	38	38	38
Special District Service Share, 1972 (%)	Pearson Correlation	-.009	.282	.181	-.082	.197	-.078	-.327*	-.707**	1
	Sig. (2-tailed)	.955	.086	.277	.626	.235	.641	.045	.000	.
	N	38	38	38	38	38	38	38	38	38

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-20: Correlations for Per Capita Expenditure of Commission in the Single Metropolitan Counties,2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.247	.146	.291	.216	.442*	-.094	-.217	.265
	Sig. (2-tailed)	.	.189	.440	.119	.251	.014	.622	.248	.156
	N	30	30	30	30	30	30	30	30	30
MSA Pop., 2000	Pearson Correlation	.247	1	.252	.662**	.471**	.179	-.232	-.098	.258
	Sig. (2-tailed)	.189	.	.179	.000	.009	.344	.218	.605	.169
	N	30	30	30	30	30	30	30	30	30
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.146	.252	1	-.381*	-.024	-.007	.290	-.309	.068
	Sig. (2-tailed)	.440	.179	.	.038	.901	.969	.120	.097	.720
	N	30	30	30	30	30	30	30	30	30
MSA Density, 2000	Pearson Correlation	.291	.662**	-.381*	1	.415*	.483**	-.316	.067	.170
	Sig. (2-tailed)	.119	.000	.038	.	.023	.007	.089	.724	.370
	N	30	30	30	30	30	30	30	30	30
Total No. of Gov't, 1997	Pearson Correlation	.216	.471**	-.024	.415*	1	.167	-.545**	.106	.301
	Sig. (2-tailed)	.251	.009	.901	.023	.	.377	.002	.577	.106
	N	30	30	30	30	30	30	30	30	30
Property Tax Generating Effort, 2000	Pearson Correlation	.442*	.179	-.007	.483**	.167	1	-.115	.161	-.062
	Sig. (2-tailed)	.014	.344	.969	.007	.377	.	.544	.394	.745
	N	30	30	30	30	30	30	30	30	30
County Service Share, 1992 (%)	Pearson Correlation	-.094	-.232	.290	-.316	-.545**	-.115	1	-.266	-.488**
	Sig. (2-tailed)	.622	.218	.120	.089	.002	.544	.	.155	.006
	N	30	30	30	30	30	30	30	30	30
Municipal Service Share, 1992 (%)	Pearson Correlation	-.217	-.098	-.309	.067	.106	.161	-.266	1	-.711**
	Sig. (2-tailed)	.248	.605	.097	.724	.577	.394	.155	.	.000
	N	30	30	30	30	30	30	30	30	30
Special District Service Share, 1992 (%)	Pearson Correlation	.265	.258	.068	.170	.301	-.062	-.488**	-.711**	1
	Sig. (2-tailed)	.156	.169	.720	.370	.106	.745	.006	.000	.
	N	30	30	30	30	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A-21: Correlations for Per Capita Expenditure of 50 Single Metropolitan Counties in 1970 which Did Not Change County Government Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.375**	.434**	.191	.446**	.783**	-.053	-.442**	.463**
	Sig. (2-tailed)	.	.007	.002	.184	.001	.000	.717	.001	.001
	N	50	50	50	50	50	50	50	50	50
MSA Pop., 1970	Pearson Correlation	.375**	1	.204	.173	.533**	.232	-.241	.029	.111
	Sig. (2-tailed)	.007	.	.154	.229	.000	.105	.092	.844	.444
	N	50	50	50	50	50	50	50	50	50
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.434**	.204	1	-.155	.163	.265	.315*	-.476**	.285*
	Sig. (2-tailed)	.002	.154	.	.283	.257	.063	.026	.000	.045
	N	50	50	50	50	50	50	50	50	50
MSA Density, 1970	Pearson Correlation	.191	.173	-.155	1	.043	.165	-.173	.084	.017
	Sig. (2-tailed)	.184	.229	.283	.	.768	.252	.229	.560	.906
	N	50	50	50	50	50	50	50	50	50
Total No. of Gov't, 1972	Pearson Correlation	.446**	.533**	.163	.043	1	.359*	-.574**	-.105	.433**
	Sig. (2-tailed)	.001	.000	.257	.768	.	.011	.000	.470	.002
	N	50	50	50	50	50	50	50	50	50
Property Tax Generating Effort, 1970	Pearson Correlation	.783**	.232	.265	.165	.359*	1	-.027	-.299*	.309*
	Sig. (2-tailed)	.000	.105	.063	.252	.011	.	.854	.035	.029
	N	50	50	50	50	50	50	50	50	50
County Service Share, 1972 (%)	Pearson Correlation	-.053	-.241	.315*	-.173	-.574**	-.027	1	-.259	-.322*
	Sig. (2-tailed)	.717	.092	.026	.229	.000	.854	.	.070	.022
	N	50	50	50	50	50	50	50	50	50
Municipal Service Share, 1972 (%)	Pearson Correlation	-.442**	.029	-.476**	.084	-.105	-.299*	-.259	1	-.831**
	Sig. (2-tailed)	.001	.844	.000	.560	.470	.035	.070	.	.000
	N	50	50	50	50	50	50	50	50	50
Special District Service Share, 1972 (%)	Pearson Correlation	.463**	.111	.285*	.017	.433**	.309*	-.322*	-.831**	1
	Sig. (2-tailed)	.001	.444	.045	.906	.002	.029	.022	.000	.
	N	50	50	50	50	50	50	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-22: Correlations for Per Capita Expenditure of 50 Single County MSAs in 2000 which Did Not Change County Government Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.381**	.271	.185	.451**	.340*	-.205	-.127	.244
	Sig. (2-tailed)	.	.006	.057	.198	.001	.016	.153	.381	.088
	N	50	50	50	50	50	50	50	50	50
MSA Pop., 2000	Pearson Correlation	.381**	1	.252	.220	.840**	-.130	-.261	.035	.119
	Sig. (2-tailed)	.006	.	.077	.125	.000	.367	.068	.809	.411
	N	50	50	50	50	50	50	50	50	50
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.271	.252	1	-.153	.277	-.096	.208	-.503**	.367**
	Sig. (2-tailed)	.057	.077	.	.290	.052	.506	.147	.000	.009
	N	50	50	50	50	50	50	50	50	50
MSA Density, 2000	Pearson Correlation	.185	.220	-.153	1	.074	.245	-.156	.216	-.118
	Sig. (2-tailed)	.198	.125	.290	.	.612	.086	.279	.133	.414
	N	50	50	50	50	50	50	50	50	50
Total No. of Gov't, 1997	Pearson Correlation	.451**	.840**	.277	.074	1	-.042	-.481**	-.038	.319*
	Sig. (2-tailed)	.001	.000	.052	.612	.	.774	.000	.791	.024
	N	50	50	50	50	50	50	50	50	50
Property Tax Generating Effort, 2000	Pearson Correlation	.340*	-.130	-.096	.245	-.042	1	-.166	.327*	-.221
	Sig. (2-tailed)	.016	.367	.506	.086	.774	.	.248	.020	.124
	N	50	50	50	50	50	50	50	50	50
County Service Share, 1992 (%)	Pearson Correlation	-.205	-.261	.208	-.156	-.481**	-.166	1	-.255	-.338*
	Sig. (2-tailed)	.153	.068	.147	.279	.000	.248	.	.074	.016
	N	50	50	50	50	50	50	50	50	50
Municipal Service Share, 1992 (%)	Pearson Correlation	-.127	.035	-.503**	.216	-.038	.327*	-.255	1	-.823**
	Sig. (2-tailed)	.381	.809	.000	.133	.791	.020	.074	.	.000
	N	50	50	50	50	50	50	50	50	50
Special District Service Share, 1992 (%)	Pearson Correlation	.244	.119	.367**	-.118	.319*	-.221	-.338*	-.823**	1
	Sig. (2-tailed)	.088	.411	.009	.414	.024	.124	.016	.000	.
	N	50	50	50	50	50	50	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-23:: Correlations for Per Capita Expenditure of 16 Single Metropolitan Counties in 1970 which Changed County Government Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.069	.318	-.144	.104	.782**	.090	-.590*	.571*
	Sig. (2-tailed)	.	.799	.230	.596	.701	.000	.739	.016	.021
	N	16	16	16	16	16	16	16	16	16
MSA Pop., 1970	Pearson Correlation	.069	1	.206	.266	.432	-.329	-.387	-.180	.444
	Sig. (2-tailed)	.799	.	.444	.320	.094	.213	.139	.505	.085
	N	16	16	16	16	16	16	16	16	16
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.318	.206	1	-.693**	.134	.109	.161	-.669**	.609*
	Sig. (2-tailed)	.230	.444	.	.003	.622	.689	.551	.005	.012
	N	16	16	16	16	16	16	16	16	16
MSA Density, 1970	Pearson Correlation	-.144	.266	-.693**	1	-.147	-.065	-.156	.567*	-.505*
	Sig. (2-tailed)	.596	.320	.003	.	.588	.812	.565	.022	.046
	N	16	16	16	16	16	16	16	16	16
Total No. of Gov't, 1972	Pearson Correlation	.104	.432	.134	-.147	1	-.103	-.747**	-.047	.537*
	Sig. (2-tailed)	.701	.094	.622	.588	.	.704	.001	.863	.032
	N	16	16	16	16	16	16	16	16	16
Property Tax Generating Effort, 1970	Pearson Correlation	.782**	-.329	.109	-.065	-.103	1	.079	-.189	.150
	Sig. (2-tailed)	.000	.213	.689	.812	.704	.	.771	.484	.579
	N	16	16	16	16	16	16	16	16	16
County Service Share, 1972 (%)	Pearson Correlation	.090	-.387	.161	-.156	-.747**	.079	1	-.406	-.218
	Sig. (2-tailed)	.739	.139	.551	.565	.001	.771	.	.118	.418
	N	16	16	16	16	16	16	16	16	16
Municipal Service Share, 1972 (%)	Pearson Correlation	-.590*	-.180	-.669**	.567*	-.047	-.189	-.406	1	-.803**
	Sig. (2-tailed)	.016	.505	.005	.022	.863	.484	.118	.	.000
	N	16	16	16	16	16	16	16	16	16
Special District Service Share, 1972 (%)	Pearson Correlation	.571*	.444	.609*	-.505*	.537*	.150	-.218	-.803**	1
	Sig. (2-tailed)	.021	.085	.012	.046	.032	.579	.418	.000	.
	N	16	16	16	16	16	16	16	16	16

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-24: Correlations for Per Capita Expenditure of 16 Single Metropolitan Counties in 2000 which Changed County Government Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.250	.257	.064	-.086	.143	.091	-.399	.212
	Sig. (2-tailed)	.	.351	.336	.814	.752	.597	.738	.125	.449
	N	16	16	16	16	16	16	16	16	15
MSA Pop., 2000	Pearson Correlation	.250	1	.265	.399	.353	-.367	-.325	-.465	.562*
	Sig. (2-tailed)	.351	.	.322	.125	.180	.162	.219	.069	.029
	N	16	16	16	16	16	16	16	16	15
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.257	.265	1	-.577*	.187	-.352	-.156	-.812**	.772**
	Sig. (2-tailed)	.336	.322	.	.019	.489	.181	.563	.000	.001
	N	16	16	16	16	16	16	16	16	15
MSA Density, 2000	Pearson Correlation	.064	.399	-.577*	1	-.130	.143	.015	.351	-.369
	Sig. (2-tailed)	.814	.125	.019	.	.630	.597	.956	.183	.176
	N	16	16	16	16	16	16	16	16	15
Total No. of Gov't, 1997	Pearson Correlation	-.086	.353	.187	-.130	1	.203	-.807**	-.132	.564*
	Sig. (2-tailed)	.752	.180	.489	.630	.	.452	.000	.625	.029
	N	16	16	16	16	16	16	16	16	15
Property Tax Generating Effort, 2000	Pearson Correlation	.143	-.367	-.352	.143	.203	1	-.349	.416	-.270
	Sig. (2-tailed)	.597	.162	.181	.597	.452	.	.186	.109	.330
	N	16	16	16	16	16	16	16	16	15
County Service Share, 1992 (%)	Pearson Correlation	.091	-.325	-.156	.015	-.807**	-.349	1	-.078	-.491
	Sig. (2-tailed)	.738	.219	.563	.956	.000	.186	.	.774	.063
	N	16	16	16	16	16	16	16	16	15
Municipal Service Share, 1992 (%)	Pearson Correlation	-.399	-.465	-.812**	.351	-.132	.416	-.078	1	-.786**
	Sig. (2-tailed)	.125	.069	.000	.183	.625	.109	.774	.	.001
	N	16	16	16	16	16	16	16	16	15
Special District Service Share, 1992 (%)	Pearson Correlation	.212	.562*	.772**	-.369	.564*	-.270	-.491	-.786**	1
	Sig. (2-tailed)	.449	.029	.001	.176	.029	.330	.063	.001	.
	N	15	15	15	15	15	15	15	15	15

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A-25: Expenditure and Expenditure Growth (% change) by Form of County Government which Did Not Change Government Form, 1970s-2000

Forms	No.	Model 1			Model 2			Model 3		
		1970	**2000**	**% Change**	**1970**	**2000**	**% Change**	**1970**	**2000**	**% Change**
Council-manager	15	479	2,797	494.28	521	2,766	444.18	528	2,789	441.95
Council-elected Executive	6	402	2,571	549.24	466	2,769	495.15	450	2,734	509.97
Commission	29	370	2,464	569.76	345	2,461	649.55	348	2,482	646.51
Total (Mean)		406	2,577	544.65	412	2,589	569.41	414	2,604	568.76

Table A-26: Expenditure and Expenditure Growth (% change) by Form of County Government which Changed Government Form between 1970s and 2000

Forms	No.	Model 1			Model 2			Model 3		
		1970	**2000**	**% Change**	**1970**	**2000**	**% Change**	**1970**	**2000**	**% Change**
Council-manager	2	426	2,597	512.45	397	2,574	559.00	384	2,505	562.47
Council-elected Executive	13	388	2,498	549.18	378	2,460	585.30	370	2,439	578.06
Commission	1	418	2,610	524.98	330	2,499	658.09	347	2,575	642.64
Total (Mea)n		395	2,517	543.08	377	2,477	586.56	371	2,457	580.29

Table A-27: Correlations for Per Capita Expenditure of 29 Single Metropolitan Counties in 1970 which Remained Commission Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	.330	.237	.255	.134	.778**	.114	-.232	.145
	Sig. (2-tailed)	.	.081	.215	.183	.489	.000	.555	.226	.453
	N	29	29	29	29	29	29	29	29	29
MSA Pop., 1970	Pearson Correlation	.330	1	.008	.587**	.487**	.231	-.385*	-.068	.345
	Sig. (2-tailed)	.081	.	.966	.001	.007	.228	.039	.728	.067
	N	29	29	29	29	29	29	29	29	29
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	.237	.008	1	-.623**	-.099	.152	.243	-.308	.127
	Sig. (2-tailed)	.215	.966	.	.000	.610	.432	.205	.104	.512
	N	29	29	29	29	29	29	29	29	29
MSA Density, 1970	Pearson Correlation	.255	.587**	-.623**	1	.402*	.236	-.316	.141	.091
	Sig. (2-tailed)	.183	.001	.000	.	.031	.217	.095	.465	.640
	N	29	29	29	29	29	29	29	29	29
Total No. of Gov't, 1972	Pearson Correlation	.134	.487**	-.099	.402*	1	.098	-.529**	.200	.187
	Sig. (2-tailed)	.489	.007	.610	.031	.	.611	.003	.298	.332
	N	29	29	29	29	29	29	29	29	29
Property Tax Generating Effort, 1970	Pearson Correlation	.778**	.231	.152	.236	.098	1	.167	-.187	.062
	Sig. (2-tailed)	.000	.228	.432	.217	.611	.	.386	.331	.748
	N	29	29	29	29	29	29	29	29	29
County Service Share, 1972 (%)	Pearson Correlation	.114	-.385*	.243	-.316	-.529**	.167	1	-.343	-.388*
	Sig. (2-tailed)	.555	.039	.205	.095	.003	.386	.	.068	.038
	N	29	29	29	29	29	29	29	29	29
Municipal Service Share, 1972 (%)	Pearson Correlation	-.232	-.068	-.308	.141	.200	-.187	-.343	1	-.732**
	Sig. (2-tailed)	.226	.728	.104	.465	.298	.331	.068	.	.000
	N	29	29	29	29	29	29	29	29	29
Special District Service Share, 1972 (%)	Pearson Correlation	.145	.345	.127	.091	.187	.062	-.388*	-.732**	1
	Sig. (2-tailed)	.453	.067	.512	.640	.332	.748	.038	.000	.
	N	29	29	29	29	29	29	29	29	29

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table A-28: Correlations for Per Capita Expenditure of 29 Single Metropolitan Counties in 2000 which Remained Commission Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	.202	.128	.268	.184	.461*	-.074	-.204	.242
	Sig. (2-tailed)	.	.294	.507	.160	.338	.012	.704	.288	.205
	N	29	29	29	29	29	29	29	29	29
MSA Pop., 2000	Pearson Correlation	.202	1	.212	.656**	.398*	.260	-.184	-.046	.178
	Sig. (2-tailed)	.294	.	.270	.000	.033	.174	.340	.811	.355
	N	29	29	29	29	29	29	29	29	29
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	.128	.212	1	-.425*	-.066	.005	.317	-.297	.040
	Sig. (2-tailed)	.507	.270	.	.021	.732	.981	.093	.117	.839
	N	29	29	29	29	29	29	29	29	29
MSA Density, 2000	Pearson Correlation	.268	.656**	-.425*	1	.378*	.516**	-.294	.095	.129
	Sig. (2-tailed)	.160	.000	.021	.	.043	.004	.121	.623	.503
	N	29	29	29	29	29	29	29	29	29
Total No. of Gov't, 1997	Pearson Correlation	.184	.398*	-.066	.378*	1	.200	-.530**	.145	.258
	Sig. (2-tailed)	.338	.033	.732	.043	.	.298	.003	.452	.177
	N	29	29	29	29	29	29	29	29	29
Property Tax Generating Effort, 2000	Pearson Correlation	.461*	.260	.005	.516**	.200	1	-.130	.153	-.045
	Sig. (2-tailed)	.012	.174	.981	.004	.298	.	.502	.428	.817
	N	29	29	29	29	29	29	29	29	29
County Service Share, 1992 (%)	Pearson Correlation	-.074	-.184	.317	-.294	-.530**	-.130	1	-.288	-.473**
	Sig. (2-tailed)	.704	.340	.093	.121	.003	.502	.	.129	.010
	N	29	29	29	29	29	29	29	29	29
Municipal Service Share, 1992 (%)	Pearson Correlation	-.204	-.046	-.297	.095	.145	.153	-.288	1	-.708**
	Sig. (2-tailed)	.288	.811	.117	.623	.452	.428	.129	.	.000
	N	29	29	29	29	29	29	29	29	29
Special District Service Share, 1992 (%)	Pearson Correlation	.242	.178	.040	.129	.258	-.045	-.473**	-.708**	1
	Sig. (2-tailed)	.205	.355	.839	.503	.177	.817	.010	.000	.
	N	29	29	29	29	29	29	29	29	29

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A-29: Correlations for Per Capita Expenditure of 9 Single Metropolitan Counties in 1970 which Changed to Reformed from Commission Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1972	MSA Pop., 1970	MSA Land, 1970 (Sq. Km.)	MSA Density, 1970	Total No. of Gov't, 1972	Property Tax Generating Effort, 1970	County Service Share, 1972 (%)	Municipal Service Share, 1972 (%)	Special District Service Share, 1972 (%)
MSA Per Capita Expenditure, 1972	Pearson Correlation	1	-.630	-.171	.230	-.730*	.776*	.684*	-.118	-.511
	Sig. (2-tailed)	.	.069	.659	.552	.025	.014	.042	.762	.160
	N	9	9	9	9	9	9	9	9	9
MSA Pop., 1970	Pearson Correlation	-.630	1	-.136	.431	.514	-.762*	-.549	.252	.217
	Sig. (2-tailed)	.069	.	.727	.247	.157	.017	.126	.514	.575
	N	9	9	9	9	9	9	9	9	9
MSA Land, 1970 (Sq. Km.)	Pearson Correlation	-.171	-.136	1	-.761*	-.147	-.052	.478	-.691*	.393
	Sig. (2-tailed)	.659	.727	.	.017	.705	.894	.193	.039	.295
	N	9	9	9	9	9	9	9	9	9
MSA Density, 1970	Pearson Correlation	.230	.431	-.761*	1	.021	.078	-.272	.632	-.519
	Sig. (2-tailed)	.552	.247	.017	.	.958	.843	.479	.068	.152
	N	9	9	9	9	9	9	9	9	9
Total No. of Gov't, 1972	Pearson Correlation	-.730*	.514	-.147	.021	1	-.685*	-.911**	.385	.401
	Sig. (2-tailed)	.025	.157	.705	.958	.	.042	.001	.307	.285
	N	9	9	9	9	9	9	9	9	9
Property Tax Generating Effort, 1970	Pearson Correlation	.776*	-.762*	-.052	.078	-.685*	1	.606	.027	-.616
	Sig. (2-tailed)	.014	.017	.894	.843	.042	.	.084	.944	.077
	N	9	9	9	9	9	9	9	9	9
County Service Share, 1972 (%)	Pearson Correlation	.684*	-.549	.478	-.272	-.911**	.606	1	-.610	-.207
	Sig. (2-tailed)	.042	.126	.193	.479	.001	.084	.	.081	.592
	N	9	9	9	9	9	9	9	9	9
Municipal Service Share, 1972 (%)	Pearson Correlation	-.118	.252	-.691*	.632	.385	.027	-.610	1	-.649
	Sig. (2-tailed)	.762	.514	.039	.068	.307	.944	.081	.	.059
	N	9	9	9	9	9	9	9	9	9
Special District Service Share, 1972 (%)	Pearson Correlation	-.511	.217	.393	-.519	.401	-.616	-.207	-.649	1
	Sig. (2-tailed)	.160	.575	.295	.152	.285	.077	.592	.059	.
	N	9	9	9	9	9	9	9	9	9

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A-30: Correlations for Per Capita Expenditure of 9 Single Metropolitan Counties in 2000 which Changed to Reformed from Commission Form Between 1970s and 2000

Correlations

		MSA Per Capita Expenditure, 1997	MSA Pop., 2000	MSA Land, 2000 (Sq. Km.)	MSA Density, 2000	Total No. of Gov't, 1997	Property Tax Generating Effort, 2000	County Service Share, 1992 (%)	Municipal Service Share, 1992 (%)	Special District Service Share, 1992 (%)
MSA Per Capita Expenditure, 1997	Pearson Correlation	1	-.029	-.714*	.689*	-.504	.361	.449	.368	-.639
	Sig. (2-tailed)	.	.942	.031	.040	.167	.339	.225	.329	.064
	N	9	9	9	9	9	9	9	9	9
MSA Pop., 2000	Pearson Correlation	-.029	1	-.096	.494	.333	-.295	-.515	-.143	.504
	Sig. (2-tailed)	.942	.	.806	.176	.382	.440	.156	.714	.167
	N	9	9	9	9	9	9	9	9	9
MSA Land, 2000 (Sq. Km.)	Pearson Correlation	-.714*	-.096	1	-.701*	-.128	-.483	.142	-.844**	.585
	Sig. (2-tailed)	.031	.806	.	.035	.742	.188	.715	.004	.098
	N	9	9	9	9	9	9	9	9	9
MSA Density, 2000	Pearson Correlation	.689*	.494	-.701*	1	.048	.439	-.167	.405	-.207
	Sig. (2-tailed)	.040	.176	.035	.	.903	.237	.667	.279	.594
	N	9	9	9	9	9	9	9	9	9
Total No. of Gov't, 1997	Pearson Correlation	-.504	.333	-.128	.048	1	.271	-.953**	.278	.488
	Sig. (2-tailed)	.167	.382	.742	.903	.	.480	.000	.469	.182
	N	9	9	9	9	9	9	9	9	9
Property Tax Generating Effort, 2000	Pearson Correlation	.361	-.295	-.483	.439	.271	1	-.200	.416	-.191
	Sig. (2-tailed)	.339	.440	.188	.237	.480	.	.605	.265	.623
	N	9	9	9	9	9	9	9	9	9
County Service Share, 1992 (%)	Pearson Correlation	.449	-.515	.142	-.167	-.953**	-.200	1	-.192	-.594
	Sig. (2-tailed)	.225	.156	.715	.667	.000	.605	.	.620	.092
	N	9	9	9	9	9	9	9	9	9
Municipal Service Share, 1992 (%)	Pearson Correlation	.368	-.143	-.844**	.405	.278	.416	-.192	1	-.675*
	Sig. (2-tailed)	.329	.714	.004	.279	.469	.265	.620	.	.046
	N	9	9	9	9	9	9	9	9	9
Special District Service Share, 1992 (%)	Pearson Correlation	-.639	.504	.585	-.207	.488	-.191	-.594	-.675*	1
	Sig. (2-tailed)	.064	.167	.098	.594	.182	.623	.092	.046	.
	N	9	9	9	9	9	9	9	9	9

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table A-31: Statistical Testing for Hypothesis I: Mean Comparison for Growth in Expenditure (Used Model 3) between Metropolitan Counties with Reformed County Government and Metropolitan Counties with Commission Form of County Government in 2000

Group Statistics

	Category of Reform	N	Mean	Std. Deviation	Std. Error Mean
Growth in Expenditure, 1970-2000	Reformed	35	5.0716	1.34171	.22679
	Unreformed	30	6.4638	1.62205	.29614

Reformed (X_1)
Unreformed (X_2)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Growth in Expenditure	Equal variances assumed	1.233	.271	3.787	63	.000	1.3922	.36758	.77855	2.00583
	Equal variances not assumed			3.732	56.434	.000	1.3922	.37301	.76841	2.01598

Notes

1) Equal variance assumption test:

Ha: $\sigma_1^2 \neq \sigma_2^2$

H_0: $\sigma_1^2 = \sigma_2^2$

Since Levene's test for equality of variances with α=0.1 exhibits significance level at 0.271, the null hypothesis is not rejected which means the two sample mean variances are equal. Therefore the "standard error difference for equal variances assumed," 0.36758, was used for two sample t-test to determine the mean difference value.

2) T-test for hypothesis with df=(65-2), α=0.1, and left tailed test:

Ha: μp/reformed < μp/unreformed (commission)

H_0: μp/reformed = μp/unreformed (commission)

P = Growth in expenditure

T = ($\overline{X}_1 - \overline{X}_2$)/Standard error

= (5.0716-6.4638)/0.36758

= -3.787

Critical value of T-stat = -1.282

3) T-test result: T=-3.787 (calculated) < the critical value, T=-1.282 from the table. Reject the null hypothesis.

Table A-32: Statistical Testing for Hypothesis II: Mean Comparison for Growth in Expenditure (Used Model 3) between Metropolitan Counties which Had Commission Form of County Government and Metropolitan Counties which Changed Form of County Government to Reformed Government from Commission Form During 1970-2000

Group Statistics

	Reformism	N	Mean	Std. Deviation	Std. Error Mean
Growth in Expenditure, 1970-2000	Traditional	29	6.4651	1.65074	.30654
	Reformed	9	5.7884	.87298	.29099

Traditional: Remained commission form (X2)
Reformed: Changed from commission to reformed government (X1)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Growth in Expenditure	Equal variances assumed	1.923	.174	1.172	36	.249	.6767	.57726	-.29786	1.65131
	Equal variances not assumed			1.601	26.339	.121	.6767	.42266	-.04383	1.39728

Notes

1) Equal variance assumption test:

Ha: $\sigma_1^2 \neq \sigma_2^2$

H_0: $\sigma_1^2 = \sigma_2^2$

Since Levene's test for equality of variances with α=0.1 exhibits a significance level at 0.174, the null hypothesis is not rejected which means the two sample mean variances are equal. Therefore the "standard error difference for equal variances assumed", 0.57726, was used for two sample t-test to determine the mean difference value.

2) T-test for hypothesis with df=(43-2), α=0.1, and left tailed test:

Ha: μp/reformed < μp/commission

H_0: μp/reformed = μp/commission

P = Growth in expenditure

T = ($\overline{X}_1 - \overline{X}_2$)/Standard error

= (5.7884-6.4651)/0.57726

= -1.172

Critical value of T-stat = -1.282

3) T-test result: T=-1.172 (calculated) > the critical value of T=-1.282 from the table. Do not reject the null hypothesis.

Table A-33**:** Statistical Testing for Hypothesis III: Mean Comparison for Growth in Expenditure (Used Model 3) between Increase and Decrease in County Share of Service Responsibility

Group Statistics

	Growth in County	N	Mean	Std. Deviation	Std. Error Mean
Growth in Expenditure, 1970-2000	Decrease	42	5.5979	1.61336	.24895
	Increase	23	5.9265	1.65821	.34576

Decrease (X_2): Change rate <0
Increase (X_1) : Change rate $\geq$0

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Growth in Expenditure	Equal variances assumed	.082	.775	-.777	63	.440	-.3285	.42260	-1.03402	.37697
	Equal variances not assumed			-.771	44.329	.445	-.3285	.42606	-1.04428	.38723

Notes

1) Equal variance assumption test:

Ha: $\sigma_1^2 \neq \sigma_2^2$

H_0: $\sigma_1^2 = \sigma_2^2$

Since Levene's test for equality of variances with α=0.1 exhibits significance level at 0.775, the null hypothesis is not rejected which means the two sample mean variances are equal. Therefore the "standard error difference for equal variances assumed," 0.42260,was used for two sample t-test to determine the mean difference value.

2) T-test for hypothesis with df=(65-2), α=0.1, and right tailed test:

Ha: μp/increase > μp/decrease

H_0: μp/increase = μp/decrease, where

P = Growth in expenditure

T = ($\overline{X}_1 - \overline{X}_2$)/Standard error

= (5.9265-5.5979)/0.42260

= 0.777

Critical value of T-stat =1.282

3) T-test result: T=0.777 (calculated) < the critical value, T=1.282 from the table. Do not reject the null hypothesis.

Table A-34: Statistical Testing for Hypothesis IV: Mean Comparison for Growth in Expenditure (Used Model 3) between Increase and Decrease in Municipal Share of Service Responsibility

Group Statistics

	Growth in Municipal	N	Mean	Std. Deviation	Std. Error Mean
Growth in Expenditure, 1970-2000	Decrease	51	5.8961	1.67083	.23396
	Increase	14	5.0514	1.28284	.34285

Decrease (X_2): Change rate <0
Increase (X_1) : Change rate $\geq$0)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Growth in Expenditure	Equal variances assumed	1.608	.209	1.751	63	.085	.8447	.48230	.03959	1.64991
	Equal variances not assumed			2.035	26.436	.052	.8447	.41508	.13722	1.55228

Notes

1) Equal variance assumption test:

Ha: $\sigma_1^2 \neq \sigma_2^2$

H_0: $\sigma_1^2 = \sigma_2^2$

Since Levene's test for equality of variances with α=0.1 exhibits significance level at 0.209, the null hypothesis is not rejected which means the two sample mean variances are equal. Therefore the "standard error difference for equal variances assumed," 0.48230, was used for two sample t-test to determine the mean difference value.

2) T-test for hypothesis with df=(65-2), α=0.1, and left tailed test:

Ha: μp/increase < μp/decrease

H_0: μp/increase = μp/decrease, where

P = Growth in expenditure

T = ($\overline{X}_1 - \overline{X}_2$)/Standard error

= (5.0514-5.8961)/0.48230

= -1.751

Critical value of T-stat = -1.282

3) T-test result: T=-1.751 (calculated) < the critical value, T=-1.282 from the table. Reject the null hypothesis.

Table A-35: Statistical Testing for Hypothesis V: Mean Comparison for Growth in Expenditure (Used Model 3) between Increase and Decrease in Special District Share of Service Responsibility

Group Statistics

	Growth in Secial	N	Mean	Std. Deviation	Std. Error Mean
Growth in Expenditure, 1970-2000	Decrease	12	5.3453	1.49988	.43298
	Increase	53	5.7977	1.65289	.22704

Decrease (X_2): Change rate <0
Increase (X_1) : Change rate $\geq$0

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Growth in Expenditure	Equal variances assumed	.111	.740	-.870	63	.388	-.4524	.52020	-1.32081	.41605
	Equal variances not assumed			-.925	17.599	.367	-.4524	.48890	-1.30120	.39644

Notes

1) Equal variance assumption test:

Ha: $\sigma_1^2 \neq \sigma_2^2$

H_0: $\sigma_1^2 = \sigma_2^2$

Since Levene's test for equality of variances with α=0.1 exhibits significance level at 0.740, the null hypothesis is not rejected which means the two sample mean variances are equal. Therefore the "standard error difference for equal variances assumed," 0.52020, was used for two sample t-test to determine the mean difference value.

2) T-test for hypothesis with df=(65-2), α=0.1, and left tailed test:

Ha: μp/increase < μp/decrease

H_0: μp/increase = μp/decrease, where

P = Growth in expenditure

T = ($\overline{X}_1 - \overline{X}_2$)/Standard error

= (5.7977-5.3453)/0.52020

= 0.870

Critical value of T-stat = -1.282

3) T-test result: T=0.870 (calculated) > the critical value, T=-1.282 from the table. Do not reject the null hypothesis.

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