

The Effects of Community Quality of Life on Local Policy Decisions

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## Abstract

There have been extensive debates on the factors that influence local policy decisions. Although many researchers have contributed to uncovering various influences such as political, economic, institutional, and demographic factors on local policy decisions, however, the concept of QoL rarely has used in extant literature. Local government spending is likely to be affected by citizen demands for achieving community well-being. Additionally, given that different policy functions variably affect local circumstances, the impact of QoL on local policy decisions will depend on the policy area. Hence, this study examined the relationship between QoL and local budgetary decisions based on Peterson's (1981) policy scheme of, three distinct policy arenas (developmental, allocational, and redistributive policy). In examining the relationship of QoL and city spending across policy functions, I also considered economic, political, institutional, and demographic factors, derived from various theoretical perspectives on local policy decisions.

The relative influences of community QoL as well as other factors on local policy decisions were estimated by two-stage least squares regression analysis (2SLS) for developmental spending and by ordinary least squares (OLS) for allocational and redistributive spending. To measure community QoL, this study used 89,066 completed surveys from 167 communities in the United States for 2002-2008 are used. QoL appeared as a critical factor influencing local government expenditures in the three policy areas. The impact of QoL on local spending in the three areas differed depending on city income levels; city income levels then moderated local policy decisions.

These findings suggest that local policy priorities adjusted in accordance with economic growth. Allocational policy functions also should be thought to be functions of cities geared toward giving them a competitive edge over other cities by meeting evolved citizen preferences for city amenities. These findings also point to distinct patterns of political activities in each policy arena. Given that community QoL reflects adjusted citizens' demands, I contend that community QoL can contribute to performance management by providing additional public information and a complementary performance indicator.

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## **Chapter 1 - Introduction**

This chapter provides an explanation of the research topic, Quality of Life, and support for the significance of this study. It includes a statement of the unexplored aspects of current research on local policy decisions in terms of governmental responsiveness. The research question is defined and the significance of the study is explained. The chapter concludes with an overview of this dissertation.

### **A. Research Question**

There have been extensive debates on which factors influence local policy decisions. Pluralism scholars such as Dahl (1961) and Polsby (1980) contend that citizens can affect the direction of local policy through the outcomes of elections, since the U.S. system is open and accessible to the extent that any interest held by a significant portion of people can be represented through the actions of groups. Through the use of this mechanism, local policy decisions are consistent with the political ideology of the majority of the people. To the contrary, a range of researchers from Tiebout (1956) to Peterson (1981) argue that local governments will favor developmental policies in their policy decisions, not only to enhance local tax bases but also to retain and attract people. This perspective posits that local policies are constrained by economic considerations. In addition to these views, various perspectives such as new institutionalism, regime theory, urban social movements, and techno-bureaucracy suggest factors and actors that most heavily influence local policy decisions. They have contributed to uncovering the potential influences of governmental structures (Clingermayer & Feiock, 2001; Green & Fleischmann, 1991; Lowery & Berry, 1983; Sharp & Maynard-Moody, 1991), networks

of political and civic relationships (Davies, 2003; Stoker, 1995; Stone, 1989, 2004), the collective identities of social class (Buechler, 1995; Castells, 1985; Morris & Mueller, 1992), and local social environments (Goetz, 1994; Pickvance, 2003).

Despite these various efforts to explain local policy decisions, however, extant literature rarely has used the concept of Quality of Life (QoL) (but see, Hollar, 2003; Milbrath, 1979; Myers, 1988).<sup>1</sup> Given that local public policies are public actions to protect and improve local conditions and citizens' lives, community conditions can be seen as outputs of community actions (Eckersley, 2000a; Myers, 1988; Sirgy, 2010). As citizens are continually reinterpreting and redefining their needs along with changes in community conditions (Henig, 1992), QoL<sup>2</sup> can be regarded as citizens' evaluation of the outputs of community actions according to the evolving needs of the community. In paying attention to serving local needs and demands, local governments in this view prioritize policies that will most improve their citizens' QoL.

Local governments appear now to be more concerned with improving QoL. For instance, since 2003 the city of Denver, Colorado has organized five primary goals for city operations. Enhanced QoL was targeted in one of these goals (2009 Approved Budget).<sup>3</sup> To track progress on the attainment of the policy goals, citizen evaluation of QoL in Denver has been utilized as a performance indicator for the government since 2002. Similarly, the city council of Palm Coast,

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<sup>1</sup> To describe the effect of the Virginia Independence Program (VIP), for example, Hollar (2003) investigates QoL of the program recipients. Myers (1988) proposes the concept of QoL as an indicator to reflect the trend of local conditions along with local policy implementation. Milbrath (1979) argues that QoL is a useful policymaking tool that can help policy makers arrive at more reliable and valid inferences about the level of quality of living in an environment.

<sup>2</sup> A detailed discussion of the concept of QoL will be presented in the Chapter 2.

<sup>3</sup> These five primary goals are enhanced quality of life, economic vitality and opportunity, customer service, workplace morale, and fiscal responsibility (City of Denver, CO, 2009 Approved Budget).

Florida also set QoL in the city as one of its main policy goals.<sup>4</sup> As an elected local legislative body, the council makes use of citizens' rating of overall QoL in Palm Coast to tap its primary performance. The city employs enhancing QoL as the main objective for community development. Given that government budgets address all of the policy priorities to some degree, the instances suggest that the level of QoL in a community is likely to have an impact on local policy decisions.

In addition to considerations of QoL in government operations, the impact of QoL on local policy decisions will be distinctive depending on the policy area, given that different policy functions variably affect local circumstances. Local government officials differentially treat public policies depending on their impacts on the local economy: developmental (positive), allocational (neutral), and redistributive (negative) policy (Peterson, 1981). Using this policy typology, the following question is raised about the relationship between QoL and local policy decisions in the three distinct policy functions.

- How does the level of Quality of Life have an impact on local policy decisions across policy areas?

To explore this question, this study investigates the relationship between QoL and policy decisions across policy areas at the city level. As city governments have a high degree of autonomy in implementing public policies compared to county governments (Basolo, 2000), city-level analysis may be better able to capture the dynamics of QoL and local policy decisions.

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<sup>4</sup> Sustainability, economic development, environmental concerns, financial stability, public safety, and quality of life are the major concerns for the City Council (City of Palm Coast, FL, 2009 Approved Budget).

This study also considers economic, political, institutional, and demographic factors, which are derived from various theoretical perspectives on local policy decisions, in examining the relationship between QoL and city spending across policy functions.

### **B. Significance of the Study**

In representative democracies, citizens delegate authority and responsibilities to their governments. Government officials on behalf of citizens have to represent various segments of the population and concentrate on policy issues that are responsive to citizens' needs and wishes. Governments increasingly attempt to understand the impact of public policy through performance measurements. From this standpoint, advocates maintain that the responsiveness of governments enhances governmental accountability and the effectiveness of performance measurements. Citizen feedback on governmental services and programs has been incorporated into performance measurements to more accurately represent citizen needs in policy decisions (A. L. Franklin, Ho, & Ebdon, 2009; Wichowsky & Moynihan, 2008). Various ways -- such as voting, campaigning, joining an interest group, relying on citizen surveys, using citizen advisory committees, and attending public hearings -- have been used to increase government responsiveness in performance management (Franklin et al., 2009; Swindell & Kelly, 2000). By focusing on QoL, this study contributes to fuller understanding of public performance management, to probing the linkage of policy choices and citizen needs, to furthering a normative standard for reducing social inequality, and to examining more fully the potential influences on local policy decisions.

First, this study complements work employing existing public performance indicators, especially citizen satisfaction surveys, by using QoL as a proxy measure for citizen evaluation of

governmental actions.<sup>5</sup> Of the various ways to obtain citizen feedback on public policy, satisfaction surveys are widespread in local performance management (Franklin et al., 2009; Poister & Streb, 1999). Local decision makers and elected officials rate citizen surveys as the most valuable tool for educating the public, engaging in two-way communication, informing decisions, gaining budget support, and enhancing community trust (Franklin et al., 2009).

Citizen satisfaction surveys historically trace to the Progressive era (Miller & Miller, 1991a; Williams, 2003). At that time, local governments were widely viewed as corrupt. As one of many ways to reform local governments, city reformers focused on governmental process and wanted local governments to be distant from local partisan politics. To make the local governments more accountable, they emphasized delivery of public services that were close to the citizens' lives. Citizen satisfaction surveys have been used increasingly to measure the quality of services provided by local governments and to monitor service improvements (Miller & Miller, 1991b; Swindell & Kelly, 2000; Van Ryzin & Immerwahr, 2007). Additionally, New Public Management (NPM) in the 1990s, focusing on outcome measurement and customer service, rekindled interest in citizen satisfaction surveys. NPM assumes that local governments are service providers and citizens are customers, which puts emphasis on citizen feedback at the agency or program level. The dominance of NPM has stressed citizen satisfaction surveys that focus more on service delivery functions at the local level (Vigoda, 2002).

Although many scholars view citizen satisfaction surveys as public performance management tools to enhance the government's procedural efficiency in service delivery and

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<sup>5</sup> Many scholarly literatures suggest some evidence that governmental actions influence levels of QoL. Sirgy and his colleagues provide substantial impacts of local public services on community QoL (Grzeskowiak & Sirgy, 2007; Sirgy, 2010; Sirgy et al., 2008; Sirgy et al., 2000). Looking at the effects of quality of life on voter participation in direct democracy elections, Yonk & Reilly (2011) demonstrate that QoL is a strong predictor of voter turnout. Interestingly, voters with higher QoL are less likely to support changes in public policy. This research suggests that citizens appear satisfied with their current form of government and prevent ballot measures that would disrupt the status quo.

governmental responsiveness (e.g., Shingler, Van Loon, Alter, & Bridger, 2008; Swindell & Kelly, 2000; Van Ryzin, 2004), the emphasis on local services limits the ability of citizen satisfaction surveys to capture the impact of governmental action on citizens' lives in a community (Yang & Holzer, 2006). Given QoL as citizens' evaluation of the outputs of community actions, this study argues that QoL supplements extant tools by providing local decision makers with citizen feedback on various governmental actions including local service impacts on citizens' lives at the community level.

Secondly, this study investigates the linkage between citizen needs and governmental actions at the local level. The results contribute to understanding whether and how public policy reflects citizen preferences in a representative democracy. The scholarly literature shows a correspondence between policy preferences and policy choices, though to varying degrees, across a range of policy arenas and political institutions in the U.S. and elsewhere (Hobolt & Klemmensen, 2005; Kelly & Enns, 2010; Soroka & Wlezien, 2008). Many empirical studies examine whether the government's policy choice reflects citizen needs at the local level by using citizen satisfaction with local services (Miller & Miller, 1991a; Swindell & Kelly, 2000; Van Ryzin & Immerwahr, 2007), socio-economic indicators (Craw, 2006; Goetz, 1994; Hajnal & Trounstine, 2010), or evidence focusing on a particular policy area (Kerr & Mladenka, 1994; Sharp, 2002). These studies greatly contribute to an understanding of representative local public policy. The research argues that local policy is responsive to local needs (Goetz, 1994; Hajnal & Trounstine, 2010; Percival, Johnson, & Neiman, 2009) and that local governments distribute local resources and services to those who need them (Chamlin, 1987; Pack, 1998).

However, such studies are limited in their ability to capture the linkage between a broad sense of citizen needs and local governmental actions. The demographics in a community can be



used as a proxy to reflect the needs of specific populations such as elderly people or racial and ethnic minorities.<sup>6</sup> Socio-economic indicators such as per capita income provide only certain aspects of local circumstances like local economic conditions. Considering that certain groups likely have a significant impact on particular areas of policy-making and not on others (Dahl, 1961), the impact of citizen needs on specific public issues is limited in extending findings to other policy areas. In other words, little empirical evidence permits one to generalize about the linkage between citizen needs and policy choices at the jurisdictional level.

Few indicators exist to measure comparative local needs at the city level. Overall QoL evaluations are comprehensively incorporated judgments about the importance of each factor that affects citizens' lives in a community (Trauer & Mackinnon, 2001; Wu & Yao, 2006). The aggregation of individual citizens' subjective QoL at the community level reflects local consensus on community conditions (Cutter, 1985). Therefore, incorporating the aggregated QoL at the city level can be used to represent a broad range of local needs. The data here, by aggregating individual perceptions of QoL at the city level, allow for testing the linkage of QoL and policy choices at the city government level. The examination contributes to understanding the impact of local needs on local policy priorities.

Thirdly, QoL of the population at large plays a role in assessments using reductions in social equality as a normative standard (Evans, 1994; Massam, 2002). Although various public policies have been initiated to improve citizens' lives, it is hard to understand how social inequality among groups or places is reduced by many policies in existing public management systems. The attributes of a sufficient number of residents in each city provide unbiased evaluation data of their QoL on the outputs of community actions (Liao, 2009). By comparing

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<sup>6</sup> It is at best incomplete and at worst likely insulting to suggest that knowing someone's age or skin color tells us all we need to know about people.

the data of QoL of overall populations with those of a specific population, governments can draft new programs or review existing ones in terms of their means of addressing social inequality. Various QoL determinants from the literature might be utilized to help reduce social inequality within and across cities.

Lastly, this study examines other potential factors that affect local policy decisions. Extant research has attempted to explore how various factors such as political forces, economic imperatives, institutional constraints, and local demographic characteristics influence local policy decisions (Choi et al., 2010; Hajnal & Trounstein, 2010). Although a unified theory of local decision-making is impossible (Swanstrom, 1988), examination of different elements drawn from several theoretical perspectives provides a comprehensive understanding of how the factors affect city allocation decisions. The systematic examination of incorporating QoL in the political, economic, institutional, and demographic accounts of each theoretical perspective on policy decisions across policy areas contributes to understanding how local policy-making works. The results, including the impact of QoL on local policy decisions, supplement the extant literature on local decision-making.

### **C. Outline of Dissertation**

This dissertation consists of seven chapters. This chapter provided an overview of current research and the significance of QoL research for local policy decisions.

Chapter 2 explores the scholarly literatures on QoL, local policy decisions and influential local policy typologies. By reviewing various issues discussed in QoL research, an operational definition of QoL is proposed in terms of local policy decisions. The potential factors that

influence local policy-making and three sub-policy areas are suggested by reviewing prominent scholarship on local policy decisions among policy types.

Chapter 3 then introduces several propositions based on five factors: community QoL and other influences on local policy decisions: political ideology, economic conditions, institutional structures, and demographic characteristics. With these potential influences, the chapter presents 20 research hypotheses designed to examine the relevance of each factor on local policy decisions in distinct policy areas.

Before presenting the findings from testing the hypotheses, Chapter 4 discusses the methodology and variable measurements. This chapter provides details on the statistical models used to test the effects of the potential factors on local government spending as outcomes of policy decisions.

Chapter 5 presents the results of the hypothesis tests estimated by two-stage least squares (2SLS) and ordinary least squares (OLS) regressions, after providing descriptive analysis and regression diagnostics. The regression estimations were re-run on subsamples of higher and lower city income levels to look for threshold effects of community QoL on city spending. After that, simulations were conducted to identify the magnitude of the effects. The findings deepen understanding of the role of political actors in local policy decisions.

Chapter 6 examines the theoretical and practical implications of QoL. This chapter details the implications of QoL for understanding adjusted policy priorities, the significance of local politics in policy choices, and performance management.

Lastly, Chapter 7 summarizes the findings and the implications of this study. The chapter also discusses the study's limitations and makes suggestions for future research.

## **Chapter 2 - Literature Review**

This chapter explores current research on types of local policy, QoL, and local policy decisions. In the first section, Peterson's (1981) policy typology is reviewed to examine the differential impacts of the determinants on local needs and local policy decisions. The following section discusses the meaning of QoL and how its operational definition is related to local policy decisions. The last section presents various influences on local decisions that scholars have explored.

### **A. Local Policy Areas**

Different policy functions may differently respond to citizen needs. The impact of political, economic, institutional, and demographic factors on local policy decisions also may vary across policy areas. Public policies can be classified in numerous ways, and much scholarship has attempted to systematically classify public policies. The policy classifications of Lowi (1964, 1972), Ostrom & Ostrom (1977), and Peterson (1981) are among the most well-known. To examine the differential effects of varying policy types on local policy decisions, this section reviews the three policy classifications. Additionally, I defend my decision to group various policy functions using Peterson's (1981) policy typology.

#### ***1. Public Policy Typologies***

*Lowi's Policy Typology.* Theodore Lowi's (1964, 1972) policy typology is based on two basic dimensions: the coercive powers of the government and politics inherent in the policy-

making process. Governmental actions involve coercive power that is able to force individuals and groups into certain behaviors. Based on the coercive powers of public policy (whether the policy has an immediate or remote impact on people) and targets of the policy (whether the policy is applied to individuals or through environments), Lowi provides four policy types: distributive policy (remote coercion applied to individuals), regulatory policy (immediate coercion applied to individuals), redistributive policy (immediate coercion applied through environment), and constituent policy (remote coercion applied through environment).

The policy typology is the basis for a classification scheme to specify how policy influences power relationships (Smith, 2002). According to Lowi, different types of policy produce different power relationships among individuals and groups. These relationships can be described and predicted on the basis of policy type. Distributive policies distribute resources from the government to particular recipients. In terms of the resource distribution, the benefits concentrate on recipients, but others ultimately pay for the distributive cost. In contrast, regulatory policies impose substantial administrative or compliance costs on firms and individuals. These costs are typically concentrated on certain target groups, while the benefits are diffused over other constituents. Hence, regulatory activities are most likely to generate political conflict. In this sense, Lowi (1964) argues that “a political relationship is determined by the type of policy at stake, so that for every type of policy there is likely to be a distinctive type of political relationship” (p. 688). The policy decision process causes political activities.<sup>7</sup> The

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<sup>7</sup> Lowi's argument that political behavior varies across policy types has influenced other scholarly literature such as the work of Wildavsky (1984) on budgeting and the typology of Ripley and Franklin (1991). In particular, Ripley & Franklin (1991) have developed Lowi's policy typology by dividing regulatory policy into two categories: protective regulatory and competitive regulatory. With their policy typology, they emphasize that decisions in Congress get made in different ways on different kinds of issues. Ripley & Franklin (1991) have extended Lowi's argument to congressional decision-making and to policy implementation.

policy classification provides that distinctively different patterns of politics can be identified for different types of public policy issues (Hayes, 2007; Smith, 2002).

*Ostrom & Ostrom's Policy Typology.* Vincent Ostrom & Ostrom (1977) classify goods and services based on the extent to which they have attributes of excludability and jointness (sometimes called rivalry or subtractability) of consumption. Excludability of a good or service means that it is possible to exclude others from the consumption of the service. Jointness of consumption exists when one person's consumption of a good or service neither diminish other's consumption on the particular good or services nor reduce the availability of the benefits for others.

Private goods with low jointness and high excludability such as water supply, garbage collections, food, or housing can be expected to be produced by private markets. Public goods such as community policing service or pollution control are characterized by high jointness and low excludability. Between the private and public goods, there exist toll goods and common pool resources. Movie theaters, libraries, and cable television are common example of toll goods with high jointness and high excludability. Common pool resources such as ground water extraction, public health, an irrigation system or fishing grounds are characterized as low jointness and low excludability.

The objective of this classification is to identify the conditions under which markets and other institutions function efficiently. Although governmental provision of collective goods is often viewed to be necessary because such goods are susceptible to market failures, market failures can be corrected by other institutional vehicles as well (Ostrom, 1990; Ostrom & Ostrom, 1977). Impure public goods can be successfully provided by nongovernmental institutions. This

perspective posits that each policy type requires different institutional arrangements for efficient service delivery.

*Peterson's Policy Typology.* According to Paul Peterson (1981), three distinctive policy functions (developmental, allocational, and redistributive policy area) can be deduced by considering whether the marginal benefits exceed the marginal cost to the average taxpayer. The developmental policy arena has a positive net benefit/cost ratio, while the redistributive policy arena is negative. Allocational policy functions are located in the midpoint between the developmental and redistributive policy arena, which represents that the net benefit/cost ratio for average taxpayers is roughly zero.

Developmental policies focus on stimulating a local economy through spending on highways, utilities, water transportation, parking, and other services that enhance the economic position of the city in competition with others. Generally, the positive economic effects of the developmental policy, such as new employment opportunities, increased land values, and higher local revenues, are greater than the cost of implementing the policy, which includes construction costs, traffic jams, and air/water/noise pollution.

Allocational policies are neutral with respect to economic conditions. The marginal allocational expenditures neither hurt nor help the local economy. The allocational services are widely and proportionately allocated for the overall residents to sustain the community. This type of policy includes housekeeping services such as police, fire, and street maintenance services, community-wide collection of garbage and refuse, parks and recreation, general government, and financial administration. Because the total distribution of benefits is distinctive depending on the total distribution of costs, the policies could disproportionately benefit a particular segment of

the community such as property owners. However, the benefits of the policy type to average taxpayers are more or less neutral.

Redistributive policies include social welfare, low-cost housing, free medical, and so on. The redistributive policies intend to benefit less advantaged residents. One can roughly judge the redistributive policies by estimating who the beneficiaries of this service are and who pay for this service. The beneficiaries of the redistributive policy usually pay the lowest absolute amounts in local taxes, while they rarely contribute positive economic effects, such as increased land values and higher local revenues in the community. The beneficiaries and payers are rarely overlapped. Because the redistributive policies do not generate additional resources for tax bases and are detrimental to the local economy, local governments are reluctant to carry out redistributive policies at their own expense.

## ***2. Policy Decisions & Citizen Needs***

Among these policy typologies, this study examines the relationship between QoL and local policy decisions based on Peterson's (1981) policy scheme. A local policymaking process involves many stages, including agenda setting, alternative consideration, policy formation, decision making, and policy implementation. This study concentrates on local policy decisions. Lowi's (1964) policy classification is focused on politics in the policy development process, which means that his typology concentrates on a different stage of the policymaking process than does this study. Ostrom and Ostrom's (1977) policy typology focuses on the economic efficiency of local service delivery and provision of goods. Economic efficiency is a valuable aspect that must be considered in policy-making, but this study is designed to understand governmental



responsiveness via QoL. Hence, the focal point of Ostrom and Ostrom's (1977) policy typology is less suitable for this study.

In contrast, Peterson's policy scheme focuses on the distribution of the local resources to meet citizen needs. Within limited budgets and means of raising extra resources, local governments endeavor as much as possible to meet various local needs. Taking into consideration that local governments commit substantial resources to implement policy, looking at where cities spend their money shows real consequences of local decision-making (Hajnal & Trounstein, 2010). Local government spending as outcomes of policy decisions shows the basic priorities of local governments given limited resources. The notion of government expenditures as outcomes in policy decisions is accepted throughout the public budgeting and public policy literatures (e.g., Hajnal & Trounstein, 2010; Kelly & Enns, 2010; Park, 1996; Percival et al., 2009; Soroka & Wlezien, 2008). Peterson's (1981) policy scheme is consistent with this study's emphasis on local policy decisions fulfilling citizen needs.

Additionally, according to *City Limits* (1981), local governments primarily focus on a policy to provide their citizens with better life circumstances to get a competitive advantage over other localities. If local governments are not successful in meeting citizen needs for greater economic benefits, mobile citizens and businesses will migrate to other localities that can offer greater economic benefits (Peterson, 1981). Peterson regards desirable community conditions as providing greater economic benefits for citizens. The argument assumes that local public policy is responsive to citizen needs and that citizens are concerned with community conditions of higher quality. Given that location decisions are strongly associated with citizen concern for community and environmental quality (Williams & Jobes, 1990) and private businesses (Malecki,

1984; Malecki & Bradbury, 1992), Peterson's policy typology is most appropriate for QoL analysis of local policy decisions and governmental responsiveness to citizen needs.

With regard to the policy typology, Peterson (1995) later decided that day-to-day service provision is a basic necessity for economic development, and he combined allocational and developmental. However, the two types are kept separate here because policy priorities for economic development are widespread among local decision makers (Liu & Vanderleeuw, 2004; Longoria, 1994; Saiz, 1999). According to empirical research, many local decision makers categorize and order their policy preferences according to the *City Limits* (1981) policy typology. Furthermore, local governments pursue developmental policies because of the significant effects on enhancing their local tax bases, as well as meeting citizen needs. In this sense, economic growth is a unitary interest that both local governments and citizens share and agree upon, which generally provokes less political conflict in setting local policy priorities (Peterson, 1981). Therefore, given the different effects of developmental policies on local economies and politics compared to allocational policy functions, in addition to the distinctive policy preferences of local governments for economic growth, Peterson's *City Limits* (1981) typology is utilized here to examine the various factors including QoL that affect local policy decisions.

## **B. Quality of Life**

Quality of Life (QoL), is a complicated concept that has been shaped by contributions from various academic fields such as philosophy, geography, sociology, economics, and psychology (Dissart & Deller, 2000; Liao, Fu, & Yi, 2005; Massam, 2002). A number of partially overlapping and conflicting conceptual definitions have evolved for understanding and measuring QoL depending on research purpose (Myers, 1988). The multiplicity and ambiguity of

the concept make the public administration and policy literatures largely devoid of scholarship regarding the pursuit (Hollar, 2003). To embrace the concept of QoL in public administration research and practice, this study starts to refine the concept by reviewing QoL scholarship. By identifying various issues and approaches, this study proposes an operational definition of QoL and perhaps for other analyses.

### ***1. QoL Issues and Approaches***

First, QoL is a combination of objective social conditions and subjective judgments about the conditions (Cummins, 2000; Dissart & Deller, 2000; Evans, 1994; Sirgy et al., 2000). Quality of life depends on various objective conditions surrounding a person and subjective notions of how the person perceives the conditions (Dissart & Deller, 2000). According to these distinctive dimensions, QoL measurement research has been concerned with either the objective dimension (Blomquist, Berger, & Hoehn, 1988; Gyourko & Tracy, 1991; Roback, 1982; Stover & Leven, 1992) or the subjective dimension (Arthaud-day et al., 2005; Evans, 1994; Schneider, 1976; Sirgy, 2001; Verlet & Devos, 2009); these are called the objective indicators approach and the subjective indicators approaches, respectively (Cummins, 2000; Diener & Suh, 1997; Evans, 1994; Liao, 2009; McCrea et al., 2006; Schneider, 1976).

The objective indicators approach focuses on describing the objective circumstances of individuals, groups, or societies. Objective QoL indicators such as mortality, unemployment, income, suicide rate, literacy, and so forth have normative implications for desirable living conditions (Diener & Suh, 1997; Schneider, 1976). The objective indicators approach relies on descriptive and normative data tapped by verifiable indicators to measure the general state of individuals, groups, and society (Diener & Suh, 1997).

However, the objective indicators approach is limited in its capacity to accurately reflect people's experience and values. This challenge has led to the development of the subjective indicators approach (Cummins, 2000; Diener & Suh, 1997; Dissart & Deller, 2000; McCrea et al., 2006). The subjective indicators approach is based on citizens' assessments of their life situations including both tangible conditions such as per capita income, crime rate, and air and water quality (Phillips, 2006; Sirgy, 2001) and intangible values such as social equity, freedom, morality, and ethics (Falkenberg, 1998; Liao et al., 2005; Zagonari, 2011). Subjective QoL entails experiences, perceptions, attitudes, and values combined with life conditions (Massam, 2002). As citizens are continually reinterpreting and redefining desirable life circumstances in accordance with evolving local conditions (Henig, 1992), citizen preferences for public policies (Page & Shapiro, 1983) and for government spending (Jacoby, 1994) adjust over time. Thus, local governments can more accurately accommodate changing citizen preferences through citizen perceptions of QoL in a community.

Second, QoL is a holistic perspective on a life situation (Hollar, 2003; Massam, 2002). An individual's life situation consists of a variety of life domains<sup>8</sup> such as interpersonal relations, personal development, conditions of work, material well-being, and family ties (Dissart & Deller, 2000; Grzeskowiak et al., 2003; Liao et al., 2005; Sirgy, 2001). Although the classification of the life domains is diverse (e.g., Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976; Cohen, 2000; Michalos et al., 1995), many researchers agree that QoL as a whole is based upon an overall evaluation of an individual's various life domains (Evans, 1994; Liao et al., 2005;

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<sup>8</sup> Life domains generally refer to areas of action or aspects of people's lives creating the whole person (Sirgy, 2001).

Sirgy, 2001).<sup>9</sup> In other words, overall QoL evaluations incorporate judgments about the importance of each factor in various domains (Trauer & Mackinnon, 2001; Wu & Yao, 2006).

Much research has been done to find the relevance of QoL to a particular activity or area, such as economic conditions (Baldassare & Wilson, 1995; Diener & Diener, 1995; Diener et al., 1993), recreation (Baker & Palmer, 2006; Lloyd & Auld, 2002), neighborhood (Parkes, Kearns, & Atkinson, 2002), work (Andrews & Withey, 1976), community (Grzeskowiak et al., 2003; Sirgy et al., 2000), and crime rates and security (Michalos & Zumbo, 2000; Türksever & Atalik, 2001). These findings account for virtually limitless types of citizen needs and desires. The literature on diverse QoL factors provides the grounds for generating more responsive public policies (Evans, 1994)

Third, QoL is a synthesized construct including rational and emotional aspects of life. Many studies provide a number of distinctive components of subjective QoL such as life satisfaction (global judgments of one's life), satisfaction with important domains (e.g., satisfaction with work, family, social network), high levels of positive affect (experiencing many pleasant emotions and moods), and low levels of negative affect (experiencing few unpleasant emotions and moods) (Diener, 2000; Liao, 2009; Liao et al., 2005; Phillips, 2006; Sirgy, 2001). The two most commonly used subjective QoL components are life satisfaction and happiness (Argyle, 1997; Arthaud-day et al., 2005; Evans, 1994; Phillips, 2006; Sirgy, 2001). Life

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<sup>9</sup> In this sense, Sirgy and his colleagues (e.g., Sirgy, 1986; Sirgy & Cornwell, 2001; Sirgy et al., 2008; Sirgy et al., 2000) explain the relationship between quality of public service and Quality of Life, in what they call “the bottom-up spillover theory.” In this theoretical framework, QoL is thought to be at the top of an attitude (or satisfaction) hierarchy like Maslow’s (1970) theory of hierarchy of needs. QoL is influenced by satisfaction with life domains that the perceived quality of each local public service affects. The bottom-up theory postulates that QoL is determined by satisfaction with major life domains, such as a feeling of safety, personal health, and neighborhood satisfaction. The effect within a life domain spills over vertically to overall perception of QoL as well as to the quality of public services. They argue that the relationship between QoL and quality of each service within a community is a type of bottom-up spillover effect.

satisfaction as a cognitive component refers to rational aspects of QoL (i.e., how people think about their subjective QoL), while happiness as an affective component involves emotional aspects (i.e., how people feel about their lives) (Verlet & Devos, 2009). For instance, someone can think of a city as a very good place in which to live because the crime rate is fairly low and the education system is well organized. However, another person could view the same city as being an unpleasant place, if the person experiences discrimination in dealing with auto accidents during a vacation in the city.

The findings on these two main components of subjective QoL help explain the conceptual difference between satisfaction and QoL. According to research on the distinction between job satisfaction and quality of work life, job satisfaction is related more strongly to perceptions of organizational climate, while quality of work life is more strongly associated with individual affect for the organization and work (Ostrogna et al., 1997). As higher individual affect contributes to increased individual participation and group performances through pervasive effects on motivation (Hartel, Zerbe, & Ashkanasy, 2006), QoL underlying an individual's affect can be used to predict sense of community, attachment to the community, social inclusion, or social cohesion (Grzeskowiak & Sirgy, 2007; Hutcheson & Prather, 1988; McMillan & Chavis, 1986; Miles, 1975; Phillips, 2006). This understanding indicates that QoL conceptually complements citizen satisfaction research and offers additional information on the community to local decision-makers.

Fourth, QoL is a relative perception based on either internal or external references (Dissart & Deller, 2000; Evans, 1994; Liao et al., 2005; Sirgy, 2001). People evaluate their life circumstances based on relative criteria, such as a person's own experience and the situations of other people, which partially result in QoL inequality in similar social conditions (Hagerty, 2000;

Veenhoven & Ehrhardt, 1995). Although the references are still ambiguous, some scholars argue that a person's own experience and those of others are mainly considered in making comparisons in the QoL calculating process (Hagerty, 2000). The QoL evaluation process includes both references at the individual level. However, community-level QoL research generally relies on either a longitudinal perspective based on internal criteria (a place's past circumstances compared to its current ones) or a static perspective focusing on external criteria (other places' current ones as a comparison) depending on the purpose of the research (Myers, 1988). For example, the former perspective aims to describe whether and how the QoL of a particular group or in a community has changed over time (e.g., Eckersley, 2000a; Myers, 1987), while the latter seeks to examine why certain QoL perceptions differ compared to those of other groups or communities (e.g., Liao et al., 2005; Sirgy, Gao, & Young, 2008).

Lastly, QoL can be an indicator that represents either the cause or effect of a particular public policy (Donald, 2001; Massam, 2002). QoL research can depend on either the proposition that "QoL is an enduring characteristic that causes certain outcomes in the individual's life," or the promise that "particular variables influence an individual's QoL" (Evans, 1994, p. 61). The disagreement about the causal relationship between QoL and social environments has led to the development of two distinct approaches for community-level QoL research (Massam, 2002).

Based on the former proposition, many studies deal with QoL as a factor that to a great extent influences the location decisions of high-technology human capital (Florida, 2002) and high-tech firms (Salvesen & Renski, 2002) in the knowledge-based economy. These studies demonstrate that, as a means of the city growth, QoL is a necessary condition to achieve economic development. Alternatively, other studies rely on the latter relationship and look at the effect of a public policy on QoL. With this approach, much research is designed to examine how

QoL changes depending on alterations in a particular policy, such as local service delivery (Grzeskowiak et al., 2003; Michalos & Zumbo, 1999; Sirgy et al., 2008), social welfare policy (Hollar, 2003), and strategic urban planning (Myers, 1987; Swain & Hollar, 2003). In sum, QoL can be regarded as either a “means”/“cause” or an “end”/“effect” of a public policy at the community level (Massam, 2002).

## ***2. The Definition of QoL***

This study relies on the subjective dimension to operationally define QoL, because the objective indicators do not fully reflect citizens’ experiences and values. Public policy affects community circumstances or is affected by those circumstances. Policy-makers’ understanding of local needs are largely determined by citizen evaluation of the quality of local circumstances such as economic conditions, education, local amenities, and public safety. Subjective perceptions of citizens’ QoL allow for accommodating evolving local needs related to citizens’ lives within the community.<sup>10</sup>

As the previous section mentioned, QoL consists of a variety of life domains. Overall QoL evaluations are comprehensively incorporated judgments about the importance of each life domain. This study narrows the scope of various domains to the community-related sub-life domain. By focusing on this domain, which is called the community QoL approach (Myers, 1987; 1988; Sirgy et al., 2000), it is possible to set aside personal matters and emphasize a wide range of community issues. In other words, this study treats QoL as conceptually distinct from the physical and psychological states of individuals. This approach will better enable local decision-

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<sup>10</sup> This study does not argue that citizens’ demands are always considered in local policy decisions. Although local policy choices are affected by various factors such as partisan influences or economic constraints depending on the issue, general policy directions are roughly aligned in patterns that we generally observed in the literature, the linkage between citizens’ demands and governmental actions.



makers to identify and address specific issues that affect citizens' lives in the community by focusing on community conditions more controllable by local governments.

This study argues that the concept of QoL is conceptually distinct from citizen satisfaction. Citizen satisfaction has been extensively used to measure citizen evaluations of various public services at the local level. However, it is difficult to capture the impact of governmental action on citizens' lives in a community. Given that QoL including rational and emotional aspects of life allows local administrators to better understand citizens' affective commitments to the community, QoL conceptually complements citizen satisfaction research and offers additional information on the community such as the sense of community, attachment to the community, social inclusion, and social cohesion (Grzeskowiak & Sirgy, 2007; Hutcheson & Prather, 1988; McMillan & Chavis, 1986; Miles, 1975; Phillips, 2006). In this sense, this study uses the concept of QoL underlying citizens' affect.

With the community QoL approach (the subjective dimension, the community domain, and the concept of QoL), this study employed the static approach and regards QoL as a cause of local policy decisions. Each city has distinctive physical conditions. Local governments implement various public policies and programs to protect and improve local conditions and their citizens' lives. As citizen needs evolve along with the policy implementation, each community has a different level of QoL. Policy priorities may reflect the evolved citizen needs, as tapped by QoL. Here, QoL is defined as *citizens' overall perception of the correspondence between current and ideal community circumstances related to citizens' lives*.

This operational definition considers *the community domain*, focusing on the subjective dimensions of citizens' lives. *QoL* reflects judgments including those about life satisfaction and happiness. It is concerned with citizens' perceptions, not of their own lives, but of life in a

community, which means how well local governments are meeting citizen needs and desires (Eckersley, 2000b). Based on this conceptual definition, this study looked at whether and how the level of QoL affects local policy decisions. It looks not at how the level of QoL in a certain city is changing over time, but rather follows the static approach in which the QoL level of each city differs. Differing QoL levels, then, are predicted to differently affect local policy decisions.

Table 2-1 summarizes the various QoL issues and approaches

**Table 2-1. Various QoL Approaches and Selected Issues**

Issues	Approaches	Research Exemplars	Operational Definition
A combination of distinctive dimensions	Subjective approach vs. Objective approach	<ul style="list-style-type: none"> <li>- Grzeskowiak et al., 2003; Liao et al., 2005; Mohan &amp; Twigg, 2007; Sirgy et al., 2008</li> <li>- Blomquist et al., 1988; Cogburn &amp; Schneider, 2003; Gyourko &amp; Tracy, 1991; Peterson, 2006; UNDP, 1998</li> </ul>	<ul style="list-style-type: none"> <li>Subjective Approach</li> <li>- Relying on citizen perception of QoL in a city</li> </ul>
Holistic perspective	Work, Neighborhood, Recreation, Community, etc.	<ul style="list-style-type: none"> <li>- Andrews &amp; Withey, 1976; Ostrognay et al., 1997</li> <li>- Parkes et al., 2002; Walton et al., 2008</li> <li>- Baker &amp; Palmer, 2006; Williams &amp; Jobes, 1990</li> <li>- Myers, 1988; Sirgy et al., 2000</li> </ul>	<ul style="list-style-type: none"> <li>Community</li> <li>- Emphasizing community conditions largely controllable by local governments</li> </ul>
Synthesized construct	Satisfaction, Happiness, or Quality of Life	<ul style="list-style-type: none"> <li>- Grzeskowiak et al., 2003; Liao et al., 2005; McCrea et al., 2006</li> <li>- Hagerty, 2000; Veenhoven &amp; Ehrhardt, 1995</li> <li>- Andrews &amp; Withey, 1976; Sirgy et al., 2000</li> </ul>	<ul style="list-style-type: none"> <li>Quality of Life</li> <li>- Providing additional and expanded information on communities</li> </ul>
Comparative perception	Static vs. Longitudinal	<ul style="list-style-type: none"> <li>- Florida, 2002; Liao, 2009</li> <li>- Eckersley, 2000a; Thomas &amp; Hughes, 1986</li> </ul>	<ul style="list-style-type: none"> <li>Static Approach</li> <li>- Focusing on the difference of the QoL level across cities</li> </ul>
Analysis indicator	Means vs. Ends	<ul style="list-style-type: none"> <li>- Florida, 2002; Salvesen &amp; Renski, 2002</li> <li>- Diener &amp; Suh, 1997; Hollar, 2003</li> </ul>	<ul style="list-style-type: none"> <li>Cause of Local Policy</li> <li>- Examining the impact of QoL on local policy decision</li> </ul>

## **C. Accounts of Local Policy Decisions**

The existing literature offers a range of factors that may affect local policy outcomes, including political forces, economic conditions, institutions, and demographic characteristics. This section discusses political, economic, institutional, and demographic accounts of local policy-making.

### ***1. Political Forces***

The most well-known and the most widely supported perspective on city policy-making is pluralism (Dahl, 1961; Polsby, 1980). Its most general point is that no dominant group or a set of institutionally based elites has predominant power.<sup>11</sup> Instead, power is dispersed among several groups. In policy-making processes highly contested by participants from diverse interests, different groups have power on different issues, which means that certain groups have a significant impact on certain areas of policy-making and not other areas (Dahl, 1961). As elected officials need public support to keep their offices, they have to consider the wide range of different interests in enacting local policy. This power structure promotes conflict and bargaining among various interest groups. Although this image of local politics is “remote, alien and unrewarding activity” for most citizens (Dahl, 1961, p.279), local policy-making is open to influence from a wide range of groups, even people who do not formally participate in the decision-making process (Dahl, 1961). In this sense, local policy-making operates in “a dispersed power structure” that is open to considerable influences from various interest groups

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<sup>11</sup> This scholarly perspective is called as elite theory. According to the perspective, policy-making is controlled by a relatively small number of powerful individuals or groups (Domhoff, 2006; Hunter, 1953).

(Zeigler & Dye, 1971). Pluralism contends that the dispersed pattern of power among many groups protects people from arbitrary and capricious actions of a dominant group.

Local politicians are alert to citizen desires and would try to be responsive, if they could see an "electoral payoff" (Dahl, 1961, p. 93). Local elected officials would adopt policies consistent with the ideological preferences of their constituents. When local governments decide to implement controversial programs such as welfare, homelessness, and health care for poor and moderate income groups, the political environments of the localities have an impact on the policy outcomes (Percival et al., 2009). From this perspective, citizens can influence the direction of policy through the outcome of elections. Political forces such as the ideology of the citizens largely affect local policy outcomes.

## ***2. Economic Considerations***

The main alternative to the pluralism approach is an economic imperative model. This perspective argues that citizen mobility and city competition result in limited local decision-making that is constrained by economic considerations (Peterson, 1981). Under several assumptions,<sup>12</sup> citizens choose to locate in a community that maximizes their preferences for local services (Tiebout, 1956). Local governments compete against neighboring governments by providing their citizens with greater economic benefits (Peterson, 1981). As a way to have a competitive advantage in city competition, elected officials and city managers prioritize policies to stimulate local economic conditions. The pursuit of developmental policies helps not only enhance local tax bases but also retain and attract the mobile citizens that look for greater

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<sup>12</sup> Tiebout's (1956) argument is based on the assumptions that there are no diseconomies of scale; citizens live off dividend income; citizens are able to move easily between cities; citizens have knowledge about what goods and services different jurisdictions provide.

economic benefits. If local governments largely direct local resources to redistributive functions that impede local economic conditions, mobile citizens and businesses will migrate to other localities that can offer greater economic benefits. Cities will face perpetual fiscal crises within the structural constraints, given that local governments cannot regulate the flow of resources such as labor and investments through monetary and trade policy. Therefore, local governments primarily tend to focus on policies that strengthen local economic conditions to gain a competitive advantage over other localities and shy away from policies that could potentially hurt local economic conditions.

The policy preference of both local governments and their citizens leads to a consensus on setting local policy priorities for economic development. Economic growth is a unitary interest that local governments and citizens share (Peterson, 1981; Tiebout, 1956). Alternatively, because local economic growth will dominate the agenda of local policy-making, local political struggles would occur only in certain policy areas that do not affect the local economy. Political conflicts involve only narrow issues without great consequences on local policy decision (Peterson, 1981). From this perspective, the unitary interest largely determines policy choices at the local level, which is supposedly independent of particular political and cultural contexts. As local policy-making is constrained by economic considerations and largely beyond local political control, local economic conditions are the most significant factor that determines local policy outcomes and policy priorities.

### ***3. Institutional Structure***

Numerous works have shown that government institutions affect public policy.<sup>13</sup> Governing structures can change the nature of the local decision-making and shape the opportunities that local political actors face (Clingermayer & Feiock, 2001; Feiock & Kim, 2001; Sharp, 2002a). This institutionalism perspective<sup>14</sup> has largely focused on two aspects: local governmental institutional structures and institutional constraints from higher levels of governments. One approach points to local institutional structures such as form of government, methods of election, and city council size as critical factors in local policymaking (DeSantis & Renner, 2002; MacDonald, 2008; Nelson & Svara, 2010). Of them, the primary structural issue is choice of form of government, which determines administrative authority and functions of public officials in government (MacDonald, 2008; Nelson & Svara, 2010). Although five general forms of city government are common in the U.S., recent research<sup>15</sup> reports the council-manager and the mayor-council forms are the two predominant forms of government in U.S. cities.

The mayor-council form of government consists of an elected city council that serves as the legislative body and a separately elected mayor who holds administrative authority or executive powers. The mayor-council form of government is characterized by separation of

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<sup>13</sup> The intention here is not to discuss in any depth institutionalist thought in the social sciences, but to simply offer some accounts for variation of local policy outcomes. This study does not cover the variants of institutionalism. To understand various institutional approaches, see, for example, Hall & Taylor (1996) and Scott (2007).

<sup>14</sup> There is considerable confusion about what an institution is. Consistent with previous research, this study refers to both the rules that influence and constrain human interaction and the bundles of rules comprising an internal structure as institutions (Clingermayer & Feiock, 2001; Feiock & Kim, 2001; Sharp, 2002a).

<sup>15</sup> Usually mayor-council, council-manager, commission, town meeting, and representative town meeting forms are used to classify municipal forms of government. However, according to the ICMA national Municipal Form of Government survey (2006), 34.3% of responding communities reported that they have the mayor-council form, and 54.5% reported having the council-manager form. For more specific information, refer to <http://icma.org/Documents/Document/Document/664> (accessed Oct. 2010).

powers between the mayor and council. The institutional structure is intended to foster political responsiveness in the form of directly elected political leadership and direct representation of districts and neighborhoods. Meanwhile, the council-manager form consists of an elected city council that appoints a city manager who acts as the administrative head of the city. The city manager is generally trained in administering local government programs and may have experience in managing a number of different cities throughout his/her career. It is expected that the professional managers enhance the efficiency of local governments. The difference between the two prominent forms of government is whether authority is allocated to a single branch or to separate branches (MacDonald, 2008; Nelson & Svara, 2010). Local policy outcomes and policy priorities vary within this overriding difference of differently assigned legal authorities (e.g., Clingermayer & Feiock, 2001; DeSantis & Renner, 2002; Feiock & Kim, 2001; Frederickson, Logan, & Wood, 2003; MacDonald, 2008).

Another institutional approach points out that federalism also affects local policy decisions. Federalism entails vertical and horizontal power relationships across the branches and jurisdictions of government. In the institutional structure, grants-in-aid from higher levels of governments to local governments play a critical role in the inter-governmental relations, because of imbalanced power among governments such as limited tax sources of local governments.<sup>16</sup> As a result, local policy decisions are in part constrained by higher levels of governments, as local governments come to rely more on supports such as earmarked federal and

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<sup>16</sup> This perspective on federalism is known as coercive federalism, which some contend was launched by President Reagan's intergovernmental proposals. Coercive federalism is characterized by an emphasis on increasing state and local responsibilities and reducing federal funding. Kincaid (1990) notes that "the erosion of federal fiscal power and of constitutional and political limits on federal regulatory power in the 1970s and 1980s has produced a more coercive system of federal preemptions of state and local authority and unfunded mandates on state and local governments" (p.139). Although there have been efforts to increase collaboration and restoration as devolution, coercive federalism continued through the second Bush era (Conlan & Dinan, 2007; Posner, 2007).

state funding. The partially dependent relationship on higher levels of governments has promoted higher levels of governments' influence over local governments through various constraints such as preemptions, mandates, and categorical grants, as well as earmarked funding (Kincaid, 1990). In this sense, a range of laws, mandates, and funding from higher levels of governments have an impact on local policy decisions by forcing local governments to spend their resources in some policy areas and blocking actions of local governments in other policy areas. Those institutional factors may make a difference in local policy choices.

#### ***4. Demographic Characteristics***

Demographic characteristics in a community shape various demands for local services, which leads local governments to distribute their resources to those who need them. In this sense, various aspects of local demographic configurations such as extent of racial homogeneity, city population growth and density, and the proportion of elderly within a jurisdiction are given attention in the study of local policy (Baldassare & Wilson, 1995; Feiock & West, 1993; Marando & Reeves, 1993; Park, 1996). For instance, as household characteristics are closely related to savings and consumption patterns, projections of household growth and its composition by measures of average household size are crucial information for the development of housing policy for many local governments (Jiang & O'Neill, 2007).

This means that city demographic characteristics are fundamental indicators for predicting changes in citizen needs and setting policy priorities in a city. By using demographic characteristics, local governments can operate in a technically efficient manner and distribute resources and services to support the population (Cingranelli, 1981; Mladenka, 1980, 1981; Nivola, 1978). This perspective views local policymaking as an apolitical process, driven by the



services city governments must provide, rather than by more political explanations. From this perspective, local policy decisions are expected to show distinctive patterns depending on city demographic characteristics.

The next chapter introduces hypotheses that predict how political, economic, institutional, and demographic factors as well as QoL are expected to affect local spending in different policy areas.

## **Chapter 3 - Research Hypotheses**

This chapter covers research hypotheses that examine the impact of each factor on three sub-policy areas. After providing research hypotheses to examine the general relationships between QoL and each spending area, this chapter proposes a list of the hypotheses about political, economic, institutional, and demographic accounts on local government spending across policy arenas.

### **A. Quality of Life & Peterson's Policy Typology**

QoL is dependent on various community conditions around the person and how the person perceives the conditions (Dissart & Deller, 2000). In this mechanism, people tend to make a choice that will most improve their QoL within limited resources. Peterson (1981) assumes that citizens move to a jurisdiction offering better life circumstances, represented by greater economic benefits, by comparing local environments that present an array of opportunities and threats. In the *City Limits* perspective, local economic conditions are viewed as outcomes of city competition over location decisions of citizens and businesses who seek greater economic benefits. Local governments implement policies that strengthen local economy, which most contribute to QoL in a community.

However, unlike Peterson's assumption, this study argues that economic benefits are one of the many needs of citizens. As citizens have their own interpretation of desirable life circumstances, governmental actions focusing on promoting local economy are insufficient for government responsiveness to meet various citizens' demands. Research hypotheses to test the

relationship between QoL and local government spending across policy areas are provided in this section.

### ***1. Developmental Policy***

Many QoL studies provide that QoL has a positive relationship with community economic conditions (e.g., Baldassare & Wilson, 1995; Blanchflower & Oswald, 2004; Easterlin, 1995; Frijters et al., 2004; Sirgy et al., 2008; Zinam, 1989). For example, Sirgy et al. (2008) find that people's quality of life is affected by job availability (employment issue) in the community: Increases in satisfaction with job availability lead to increases in satisfaction with financial, work, and family life, which positively affect community well-being and overall quality of the individual's life. Salary and income level also influence their quality of life (Blanchflower & Oswald, 2004; Frijters et al., 2004). In this sense, many community planners at the town/city/regional level believe that their basic mission is essentially economic development and many policy-makers at the national and international levels accept that economic development is the foundation for social development (Sirgy, 2010).

Although the empirical research indicates that economic benefits are critical for individual's QoL, there is doubt about the idea that economic prosperity will always enhance QoL in a community. For every society, there seems to be a period that economic growth brings about an improvement in QoL, but only up to a point, which is called "the threshold point" (Eckersley, 2000a, 2000b; Max-Neef, 1995). It is argued that economic developments produce positive effects only at the lower levels of income. For example, as income increases in poor nations, QoL increases, but there is no such increase of QoL in richer nations (Diener & Seligman, 2004; Diener & Biswas-Diener, 2002; Diener & Diener, 1995; Frey & Stutzer, 2002).

Economic benefits were most important in the early stages of social development, when the fulfillment of basic human needs were the main issue. However, as societies become wealthy to the point in which they can fulfill the basic human needs of people, differences in QoL are less frequently due to income and more frequently due to non-economic factors such as social relationships and social fairness (Diener & Seligman, 2004; Eckersley, 2000a).

The non-linear relationship between income and QoL has subsequently been provided by a number of studies, which supports the existence of an income ‘threshold’ at the individual level. The positive impact of economic benefits declines as the income level increases. For instance, the correlations between individual income and QoL within-nation are stronger in poorer than in wealthier societies (Diener et al., 1993; Veenhoven & Ehrhardt, 1995). Income increases are not matched by continuing increases of QoL for people from wealthier nations. By dividing data from a West German population survey into income quintiles, Glatzer (1991) presents that if the highest quintile is given a QoL value of 100, then the others are 97, 85, 76, and 60. Similarly, Krebs & Schmidt (1995) using West German income divided into quartiles produced 100, 103, 63, and 35. Also, using two sets of the U.S. survey data, Diener et al., (1993) produced graphic evidence of this phenomenon that supports that above average incomes do not bring as much subjective QoL as below average incomes. Their results provide a curvilinear relationship between an income level and QoL, with declining increases in QoL for the upper income levels.

Based on the threshold effect of economic benefits at the national level and the non-linear relationship at the individual level, this study argues that the impact of increasing economic benefits on QoL is limited beyond the threshold point even at the community level. Local developmental policies in higher income areas are less effective in appropriately meeting citizen needs and desires. After a certain level of local economic developments such as higher income

levels, low unemployment rates, and fluent investments are achieved, the impact of income increase on QoL will be less significant (Max-Neef, 1995). Citizens are motivated less by economic considerations and the positive impacts of economic growth on citizens' QoL are declining. In response to the change of citizen preferences, local governments focus on maintaining their economic conditions, which implement developmental policies at the minimum levels necessary for sustaining economic prosperity. In other words, in higher income areas compared with other cities,<sup>17</sup> the level of QoL will have less significant effect on determining local developmental spending. However, in lower income areas, increase of economic benefits is still the most effective way in which to improve QoL in a city. Local governments are likely to respond to citizens' demands for greater economic benefits by spending more on developmental policy area. Therefore, in lower income areas, the QoL levels will have a positive impact on developmental spending. This study hypothesizes that,

*Hypothesis<sub>1a</sub>: In general, the level of QoL is likely to be positively associated with developmental spending at the city level.*

*Hypothesis<sub>1b</sub>: In higher income areas, the level of QoL will have less significant impact on developmental spending, while in lower income areas, QoL levels will have a positive impact.*

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<sup>17</sup> As mentioned in Chapter 2, a QoL evaluation mechanism consists of two kinds of references: the internal or external reference. The internal reference is mainly based on one's own past situation in judging the current QoL state. The external reference is more focused on others' current situations compared with one's own conditions (Myers, 1988). In defining QoL, as this study has adopted the static approach (focusing on the external reference at the community level QoL research), whether the income levels of cities are high or low will be determined by whether or not per capita income (PCI) is higher than the PCI of each state that the city is incorporated in the empirical tests.

## ***2. Allocational Policy***

Allocational functions are necessary “housekeeping” services of the city (Peterson, 1981). A lot of research finds that individual’s QoL is closely associated with allocational functions of the community, such as public safety (Michalos & Zumbo, 2000; Sirgy et al., 2008), parks and recreation services (Baker & Palmer, 2006), and natural environments (Türksever & Atalik, 2001). When people are satisfied with education, neighborhood, public service and local facilities, and social relations in a community, the overall QoL in the community is also increased (Cummins, 1996).

Additionally, recent research provides that allocational functions are becoming more important to citizen’s life. Citizens’ demands for more and better community amenities and appealing natural environments play a vital role in determining location decisions of people and businesses (Donald, 2001; Florida, 2002; Gottlieb, 1995; Salvesen & Renski, 2002). For example, knowledge-based firms critically consider allocational functions of a city as indirect cost factors to location decisions (Salvesen & Renski, 2002). Research and development professionals (Malecki & Bradbury, 1992) and high-technology human capital (Florida, 2002) also highly prioritize city amenities, such as recreational opportunities and crime rates, in their location decisions. Highly skilled workers are much more willing to pay for a high quality public school or park system (Malecki, 1984; Rosenberg, 1985). These studies indicate that government spending on allocational functions not only contributes to maintain local conditions, but also can attract businesses and people who want to increase their QoL. The rising importance of allocational functions alters the way that cities establish and maintain competitive advantage.

However, the growing citizen demands for allocation policy areas are still limited in generalizing the findings to other types of workers and industries (Donald, 2001), because of the specific research focus on highly-educated people and high-technology regions (e.g., Florida, 2002; Salvesen & Renski, 2002). The growing influence of allocational functions in location decisions can be a particular social trend of highly-educated people who have high incomes. Alternatively, allocational functions of a city play a role in key criteria of location decisions only after narrowing down the number of candidate locations that meet basic requirements for business, such as labors and lands, or for households such as jobs, transportation, and utility services (Donald, 2001; Salvesen & Renski, 2002). For upper-income level people, economic benefits are not likely to strongly enhance QoL. Although economic development remains an important priority, policies fostering economic development must be supplemented by other policies that will have a stronger impact on QoL such as allocational policy functions. In this sense, allocational policy functions yield the competitive edge of the city after achieving basic factors for economic development like infrastructures, land, labor, and so on (Wong, 1998). In lower income areas, local governments minimally implement allocational policies with which citizens are less concerned. The level of QoL will have less significant impact on allocational spending. Hence, this study hypothesizes that,

*Hypothesis<sub>1c</sub>: In general, the level of QoL is likely to be positively associated with allocational spending at the city level.*

*Hypothesis<sub>1d</sub>: In higher income areas, the level of QoL will have a positive impact on allocational spending, while in lower income areas, QoL levels will have less significant impact.*

### ***3. Redistributive Policy***

Local governments favor less redistributive policies over other functions due to the negative effects on the local economy, which will accompany deterioration of local tax bases (Peterson, 1981). The redistributive policies are also less attractive for all citizens except the recipients. The redistributive policies are implemented at the expense of middle- and high-income taxpayers. For average taxpayers, increased redistributive spending is equal to reduced benefits of developmental and allocational functions, which encourages the mobile citizens to migrate to another city (Peterson, 1981; Tiebout, 1951). As the redistributive policies are not preferred by a local government and most residents (Craw, 2006; Schneider, 1989; Sharp & Maynard-Moody, 1991b), the relationship between city QoL levels and redistributive spending will be negative. Especially, in higher income areas, there are relatively few citizens with incomes below official poverty levels, which indicate less local demands for redistributive services. In accordance with the local needs, local governments are likely to spend less on redistributive policies. In higher income areas, the level of QoL will be negatively associated with redistributive spending.

Meanwhile, in lower income areas, there are relatively many citizens of low and moderate income levels who benefit from redistributive policies. The greater local poverty forces local governments to respond to citizens' demands for redistributive policies (Chamlin, 1987; Pack, 1998). However, despite strong local needs, because of the negative effect on local economy, local governments are likely to minimally implement redistributive policies. In other words, as greater local poverty only leads to a minimum level of redistributive spending with less regard for local demands, the QoL levels are likely to have less significant impact on redistributive spending. In this sense, this study expects that,



*Hypothesis<sub>1e</sub>: In general, the level of QoL is likely to be negatively associated with redistributive spending at the city level.*

*Hypothesis<sub>1f</sub>: In higher income areas, the level of QoL will have a negative impact on redistributive spending, while in lower income areas, QoL levels will have less significant impact.*

In sum, the threshold effect on QoL provides that although material affluence is most influential for deciding QoL, economic prosperity of a city is insufficient for higher QoL levels in a city. People prefer developmental policies that will most improve their QoL up to the threshold point. However, beyond the threshold point, various citizen needs other than greater economic benefits will be prominent in a city. In response to the citizen needs, the focus of local policy would be shifted from economic prosperity to diverse service provision such as better parks, recreational services and facilities, educational system, environmental conservation, etc. In this sense, local policy priorities will appear to be adjustable to accommodate changing local needs.

## **B. Other Potential Factors**

The following section provides the hypotheses about political, economic, institutional, and demographic accounts. Each account is represented by partisan ideology; economic resources and jurisdiction neighborhood; form of governments and state-imposed constraints; racial homogeneity, the proportion of elderly people, population growth, and population density. Discussion of each hypothesis is provided below.

### *1. Citizen Ideology*

Local policy reflects the ideological leanings of voters in a city by the linkage of citizen preferences and public policy choices. Especially, in the bipartisan system of the U.S., the local political ideology largely affects redistributive policies rather than other policy areas (Wong, 1998). Traditionally, conservatives take a position of limiting the government size and the scope of government intervention. In this sense, they favor more restrictive spending on redistributive policy areas such as social security and health care. On the contrary, liberals emphasize a more active role of government in dealing with social problems such as poverty and health care, which results in greater government spending, especially on redistributive policy areas (Percival et al., 2009). The association between political ideology and policy choices has been empirically demonstrated at the state level (Erikson et al., 1993) and at the local level (Percival et al., 2009).

Based on these arguments, this study expects spending patterns to be tied to the citizen ideology in cities, because of the political opposition on redistributive policy functions. Cities that are more liberal will spend more on redistributive social programs like welfare and public health care compared with more ideologically conservative cities.

The gap between liberals and conservatives on allocational policy areas is less clear and longstanding as redistributive policy function (Minkoff, 2009; Schneider, 1989). However, because liberals emphasize a more active role of government in dealing with public issues, the citizen ideology also will make a significant difference in allocational spending. Taking into account that the policy preference for local economic growth is widespread in local governments (e.g., Basolo, 2000; Liu & Vanderleeuw, 2004; Longoria, 1994; Peterson, 1981; Saiz, 1999; Schneider, 1989), I expect ideology to have little or no effect in developmental policy areas.

*Hypothesis<sub>2a</sub>: Liberal political ideology will have a positive impact on allocational spending at the city level.*

*Hypothesis<sub>2b</sub>: Liberal political ideology will have a positive impact on redistributive spending at the city level.*

## **2. Economic Considerations**

With regard to local policy decisions, the competition with other local governments leads local governments to pay attention to the characteristics of neighboring jurisdictions (e.g., Minkoff, 2009; Schneider, 1989). Their public policy options are limited to those that will enhance the economic position of the city to get a competitive advantage (Peterson, 1981). In this sense, the story about public policy of city governments that are structurally constrained provides two main components of local decision-making: neighboring jurisdictions and local economic conditions. Following the economic determinism, this study expects that the keen competition would lead local governments to spend more on developmental policy functions to have a competitive advantage. The available empirical evidence is mixed. Some studies find a negative and significant relationship between the level of city competition and developmental government expenditures (Basolo & Huang, 2001; Schneider, 1989). Others report a positive relationship with developmental spending (Hajnal & Trounstine, 2010).

In addition, a fear of the loss of their tax bases from immigrating low- and moderate income level people would reduce their redistributive policies to prevent unwanted movers from entering the jurisdictions (Peterson, 1981). Choi et al. (2010) find a negative relationship between the level of city competition and redistributive government expenditures at the county level. Hence, this study hypothesizes that local governments surrounded by more jurisdictions

would be more concerned with the economic position of the community, which results in higher spending on developmental policy areas and lower spending on redistributive policy functions.

*Hypothesis<sub>3a</sub>: Cities surrounded by higher number of local governments will spend more on developmental policy functions.*

*Hypothesis<sub>3b</sub>: Cities surrounded by higher number of local governments will spend less on redistributive policy functions.*

Local governments with more economic resources can spend more on developmental policy functions such as economic and physical infrastructure rather than those with fewer resources (Park, 1996). The policy decision helps not only to enhance their competitive advantages compared to other cities, but to secure their tax bases. As developmental policy is highly preferred by local decision makers (Liu & Vanderleeuw, 2004; Longoria, 1994; Saiz, 1999), affluent cities will spend more on growth-oriented services.

Additionally, when a community achieves satisfactory levels of economic development, people put more emphasis on recreational opportunities, education system, crime rates, and local amenities (Donald, 2001; Florida, 2002; Gottlieb, 1995; Salvesen & Renski, 2002; Wong, 1998). With growing needs for allocational policy functions, local governments with affluent resources likely spend more on this policy arena to retain and attract people. The literature provides that local economic conditions predict local spending expansion in allocational policy areas.

*Hypothesis<sub>3c</sub>: City governments with greater economic resources will spend more on developmental policy functions.*

*Hypothesis<sub>3d</sub>: City governments with greater economic resources will spend more on allocational policy functions.*

### **3. Institutional Structures**

A distinguishing feature between the council-manager and the mayor-council form is who the administrative head is: mayor or city manager (Clingermayer & Feiock, 2001; Frederickson et al., 2003; MacDonald, 2008; Nelson & Svara, 2010). The city manager was created to replace mayors with non-elected outside experts to reduce the influences from the local political parties, with the hope that the city manager would remain neutral to city politics. While mayors are expected to be more responsive to citizen needs, city managers are more concerned with efficiency of local resource allocation. With political considerations diminished, council-manager form of governments lead local government officials to pursue efficiency, which results in maximizing their budget efficiency by reducing operation and maintenance expenditures (Benton, 2005; Choi et al., 2010; Lubell et al., 2005). Hence, local governments with the council-manager form will spend more on developmental policy areas that has the highest benefits, but less on allocational and redistributive policy functions because of the efforts of city officials to achieve budget efficiency. Especially, because redistributive policy areas have the lowest ratio of benefits to cost, the reformed form of government will spend less on the redistributive policy programs. Hence, this study expects that,

*Hypothesis<sub>4a</sub>: Cities with the council-manager form will spend more on developmental policy functions*

*Hypothesis<sub>4b</sub>: Cities with the council-manager form will spend less on allocational policy functions*

*Hypothesis<sub>4c</sub>: Cities with the council-manager form will spend less on redistributive policy functions.*

In the federal system of the U.S., it is difficult to explain local government expenditures without regard to the presence of state influence on local spending decisions (Marando & Reeves, 1991, 1993). In many states, local governments are bounded by state tax and debt limitations. The state-imposed constraints give local governments little power to control the direction of their own spending. The greater state-imposed restrictions will lead local governments to spend more resources on allocational policy areas to fulfill legally required functions such as reporting on general management of the local government, local disaster preparation, and financial status. Hence, cities with more state-imposed constraints are more likely to have functional responsibilities imposed by higher levels of governments, which results in spending more on allocational policy functions.

*Hypothesis<sub>4d</sub>: Cities with more state-imposed constraints on local tax will spend more on allocational policy functions.*

#### ***4. Demographic Characteristics***

Local policy is affected by demographic characteristics such as racial homogeneity, city population density, and elderly population. In a racially diverse community, minority council members tend to curtail development policy efforts or permit redistributive policy initiatives to be

implemented for the interest of under-privileged groups or areas (Clingermayer & Feiock, 1995; Wong, 1990). Meanwhile, other research on the issue shows that local governments tend to impose tougher sanctions and fewer benefits to welfare recipients living in racially diverse environments (Keiser, et al., 2004). These studies present that racial heterogeneity leads the community to less consensus on local policy decisions. As allocational policy areas are not only necessary to maintain basic city functions, but also widely and proportionately allocated to the entire city (Peterson, 1981), the variety of views and policy preferences on local service levels may be likely to lead racial heterogeneous cities to spend more on allocational policy functions.

*Hypothesis<sub>5a</sub>: Racially homogeneous cities will spend less on allocational policy functions.*

Classic urban ecological theory presents that urbanization changes the way of life in a community (Baldassare & Wilson, 1995). Citizens living in large, dense, and heterogeneous communities would be subject to greater stress, be more isolated, and be affected by greater social conflicts. The higher the population growth and density, the more social unrest and conflict will be produced (Park, 1996). There are great demands for public safety in urbanized areas. Likewise, the change of local environments forces local governments to implement additional public services and programs to cope with key issues on urbanization. In this sense, to deal with extraordinary demands on the physical environment and facilities, cities with higher population growth and density will spend more on developmental and allocational policy functions such as public safety, creating new jobs, transportation, street maintenance, traffic, etc.

*Hypothesis<sub>5b</sub>: Cities with higher population growth rates will spend more on developmental policy functions.*

*Hypothesis<sub>5c</sub>: Cities with higher population growth rates will spend more on allocational policy functions.*

A large proportion of elderly people also directly affect public policy. Because only a small portion of the elderly people work and because the elderly people needs more health care benefits (Cochran, Mayer, Carr, & Cayer, 2008), local governments with larger elderly population s will face higher demands for health care and social welfare. I hypothesizes that,

*Hypothesis<sub>5d</sub>: Cities with larger elderly populations will spend more on redistributive policy functions.*

### **C. Summary of Proposed Hypotheses**

This study mainly argues that community QoL has to be taken into account for explaining local policy decisions at the city level. Based on threshold effects of economic benefits on QoL levels, the study emphasizes the moderating role of city income levels in setting local policy priorities as well as the direct effect of QoL on local policy-making. Local governments prioritize a policy that will most improve their citizens' QoL depending on local circumstances, especially city income levels.



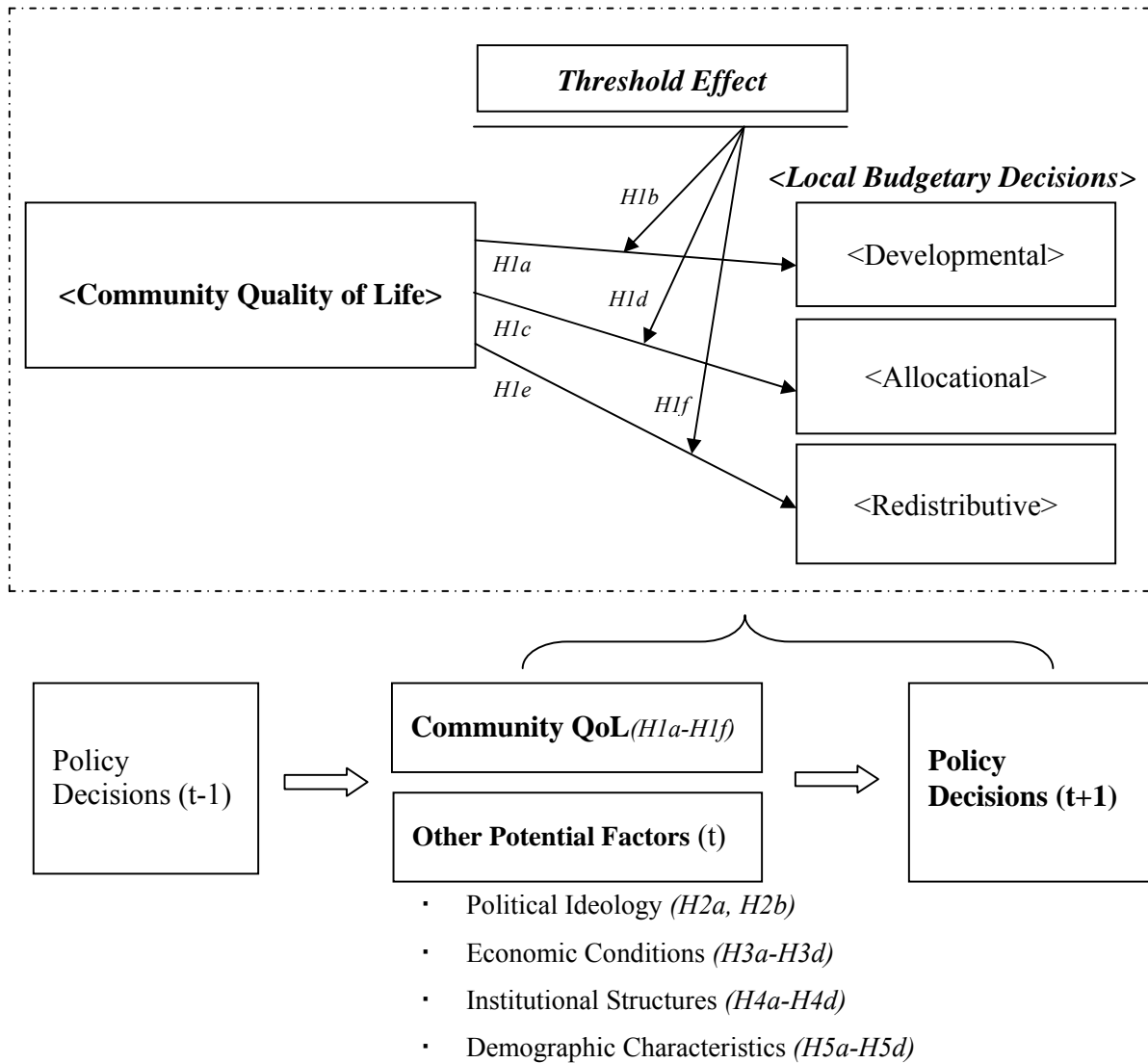
**Table 3-1. Proposed Hypotheses**

Factor	Expected Effects	Hypotheses	Direction
Direct Effect of QoL	QoL → Developmental Spending	H1a	Positive
	QoL → Allocational Spending	H1c	Positive
	QoL → Redistributive Spending	H1e	Negative
Threshold Effect of QoL	QoL in higher income cities → Allocational Spending	H1d	Positive
	QoL in higher income cities → Redistributive Spending	H1f	Negative
	QoL in lower income cities → Developmental spending	H1b	Positive
Political Ideology	Liberal Political Ideology → Allocational Spending	H2a	Positive
	Liberal Political Ideology → Redistributive Spending	H2b	Positive
Economic Determinism	Neighboring cities → Developmental Spending	H3a	Positive
	Neighboring cities → Redistributive Spending	H3b	Negative
	Economic Resources → Developmental Spending	H3c	Positive
	Economic Resources → Allocational Spending	H3d	Positive
Institutional Factors	Council-Manager Form → Developmental Spending	H4a	Positive
	Council-Manager Form → Allocational Spending	H4b	Negative
	Council-Manager Form → Redistributive Spending	H4c	Negative
	State-imposed Constraints → Allocational Spending	H4d	Positive
Demographic Characteristics	Racial homogeneity → Allocational Spending	H5a	Negative
	Pop. Growth rates → Developmental Spending	H5b	Positive
	Pop. Growth rates → Allocational Spending	H5c	Positive
	Elderly Populations → Allocational Spending	H5d	Positive

Additionally, from various theoretical perspectives and empirical research, other hypotheses examine factors that affect local policy decisions. Although none of these theoretical perspectives completely explains the features of local policy-making, each component including QoL broadens the understanding of local policy decisions. The examination that simultaneously incorporates political, economic, institutional, and demographic factors, as well as QoL, into one empirical model makes it possible to comprehensively understand influential factors on local

policy decisions across policy areas. Table 3.1 and Figure 3.1 present summaries of the proposed hypotheses showing the relevance of each factor to the three policy subareas in the model for this study.

**Figure 3-1. Conceptual Framework**



## Chapter 4 - Method

### A. Estimation Model

Public policy and services, usually determined by policy decisions at time  $t - 1$ , affect community QoL at time  $t$  (Grzeskowiak et al., 2003; Sirgy et al., 2000). In addition, to the extent that local policy choice reflects citizen needs, community QoL, viewed as local needs at time  $t$ , has an impact on local policy-making at time  $t + 1$ . Within the reciprocal relationship, the focus of this research is narrowed to the impact of QoL on local policy decisions as a way of tapping governmental accountability. This study is designed to examine the effect of QoL at time  $t$  on local policy decisions at time  $t + 1$ .

However, community QoL likely is endogenous to spending decisions. In general, citizens anticipate policy directions and form expectations of governmental actions to improve community circumstances through participating in public meetings, experiencing unexpected local issues, and observing local fiscal constraints. Citizen expectations are generally assumed to be positively related to citizen perceptions of service quality (Ryzin et al., 2004; Van Ryzin, 2004) and subjective QoL (Sirgy, 2001). By a process in which citizens compare current spending decisions with residents' prior expectations, the difference between prior expectations and actual decisions in each local policymaking process can have a positive or negative impact on community QoL. In other words, community QoL reflects not only perceived community circumstances, but also their experiences and prior expectations of the policy-making process. The main point here is that community QoL at time  $t$  cannot be simply assumed to be exogenous to local policy decisions at time  $t + 1$ . Community QoL and spending decisions are likely to be endogenous within one-budget period, which indicates the existence of reverse causality in this

model. Hence, in a setting where unobserved citizen expectation might affect community QoL, it is necessary to control for the effects of prior citizen expectations within the policy-decision process and to separate the impact of QoL on local policy decisions.

The possibility of an existing endogenous variable produces a feedback loop, which violates the recursivity assumption in ordinary least squares (OLS) regression that the value of the error terms is independent of predictor variables (Hair, Black, Babin, R. E. Anderson, & Tatham, 2005; Wooldridge, 2008). As a result, OLS estimation will be biased and inconsistent, and the attempt to infer a causal relationship will be invalid.<sup>18</sup> In a situation in which an independent variable is potentially endogenous, an instrumental variables technique is usually used to address the simultaneity issue. This study examined the effect of community QoL on local policy decisions using two-stage least squares regression analysis (2SLS) to estimate consistent coefficients of community QoL.

Community QoL is a causal variable that produces a feedback loop, making it an endogenous variable. 2SLS begins with the identification of a variable (or set of variables) that will serve as an instrument for the endogenous variable. Given that 2SLS can be described intuitively as involving two successive applications of OLS, the endogenous variable is replaced by a substitute in the first stage of 2SLS. The purpose of the first stage is to create a new variable to replace an endogenous variable, which does not violate OLS regression's recursivity assumption. To create the new variable, instrumental variables are used to replace the causal variable. This procedure is accomplished using OLS regression, with the causal variable as the dependent and instrumental variables as the independent variables in the first stage of 2SLS. In the second stage, the equation is estimated by replacing the endogenous variable with the fitted

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<sup>18</sup> Bias and inconsistency means that as the sample size increase infinitely, the estimates do not converge on the population values (Gujarati, 2009).

value generated by the instrumental variables in the first stage, serving as a proxy that is independent of the error terms in the equation.<sup>19</sup> Therefore, by creating instrument variables, 2SLS yields consistent parameter estimators in simultaneous systems.

The primary task in applying the approach was to choose appropriate instrumental variables for community QoL. Instruments were chosen on the basis of their likely relevance to community QoL identified in other studies. Since QoL is a synthesis of various factors that affect citizens' lives in a community, this study included subjective variables on citizen perceptions of government actions and public service delivery and objective measures of various local conditions in the community to more accurately reflect city circumstances in measuring QoL. The instrumental variables included citizen evaluations of public services (see, Sirgy et al, 2000; Grzeskowiak et al, 2003; Sirgy et al., 2008), citizen evaluations of government performance (Cogburn & Schneider, 2003; Yang & Holzer, 2006), climate (Berger et al., 1987; Blomquist et al., 1988a; Gyourko & Tracy, 1991; Stover & Leven, 1992), economic conditions (Baldassare & Wilson, 1995; Blanchflower & Oswald, 2004; Easterlin, 1995; Frijters et al., 2004; Sirgy et al., 2008; Zinam, 1989), public safety (Grzeskowiak et al., 2003; Sirgy et al., 2000) and demographic characteristics (Baldassare & Wilson, 1995; Cramer, Torgersen, & Kringlen, 2004; Requena, 1995) such as average household size and racial homogeneity.

## **B. Data and Measurement**

To determine the relative influence of QoL, political, economic, institutional, and demographic characteristics on local policy decisions, this study included the nine explanatory variables in this empirical model. The dependent variable is per capita expenditures at time  $t + 1$ ,

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<sup>19</sup> In other words, the endogenous variable in the model is regressed on the full set of predetermined variables (instruments) to determine the fitted value of the endogenous variable.

and the other variables are in general measured at time  $t$ . The following section provides the specific proxy and measurements for these variables.

### ***1. Dependent Variables***

This study employs per capita expenditures among policy areas classified by Peterson (1981). This indicator is appropriate for controlling for the influence of the size of population (Park, 1996). Local government expenditures were collected from 2003 through 2009 from annual financial reports and approved budget reports of each city in each year by checking the information on local government finance from the city web site. The three policy sub-areas (developmental, allocational, and redistributive policy functions) are constituted by including specific spending subcategories that fit most closely into that spending area.<sup>20</sup>

The developmental policy expenditures are aggregated from spending categories affecting local economic environments including planning and zoning, public transportation, parking facilities, and utility expenditures such as those for water, gas, electric and airports. Allocational policy expenditures are pooled to include city spending on public safety, education, financial activity such as debt management, garbage and solid waste, flood control and storm-water control, general government services, recreational facilities, and culture functions.

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<sup>20</sup> Although education spending is included in the redistributive category in analyzing government expenditures in *City Limits*, Peterson (1981) admits that educational spending reflects both developmental and redistributive aspects (serving both advantaged and disadvantaged interests of the local population) depending on the nature of the city. Peterson classifies local policy functions as developmental, allocational, and redistributive policy type, according to whether the median taxpayer's benefits/cost ratio resulting from provision of a service is positive, roughly zero, or negative. Given that the benefits of allocational services are widely and proportionately allocated for the overall citizenry and that educational spending as a routine function is intended to sustain the community, this study includes education in the allocational policy type. The classification is consistent with the approach of previous studies (Choi et al., 2010; Hwang & Gray, 1991; Mladenka, 1980; Percival et al., 2009; Wong, 1988).

Additionally, city and school district jurisdictions do not overlap in many states, and they often operate on different independent budgets. Given that this study only examines city budgets considered in annual financial reports, educational spending by school districts is beyond the scope of this study.

Redistributive policy expenditures are aggregated from spending on housing services, human services such as shelter and job training, social work, child welfare activities, medical services, and hospitals.

## ***2. Endogenous Variable***

*Community Quality of Life (QoL)*. The focus of this study is on the city level, while QoL is measured by reported individual QoL perception in a city. To analyze QoL perception at the city level, the QoL data were aggregates of individuals QoL perceptions into a mean average for each city. A sufficient number of residents in each city<sup>21</sup> provide unbiased evaluation data on the outputs of community actions (Liao, 2009).

The data were obtained from the National Citizen Satisfaction Survey conducted by the National Research Center in Boulder, Colorado from 2002 through 2008 at the request of each city government. As Table 4-1 shows, a total of 89,066 completed surveys were collected from cities of populations of 25,000 or more in the U.S. according to the 2000 Census. As a result, 167 reports of community QoL from 95 cities in 32 states were used.<sup>22</sup> Valid responses for the entire sample ranged from 221 to 1,891 depending on the population of each city. These survey data were statistically weighted to reflect the actual geographical distribution and demographic characteristics of the population in each city at the 95% confidence interval.

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<sup>21</sup> To yield stable estimates, sample data should not be subject to the peculiar outcomes of a particular segment or group that differs considerably from that of the entire population. The sample should be representative of the population and large enough to provide sufficient data for statistically reliable conclusions to be drawn.

<sup>22</sup> The cross-sectional analysis is designed to examine the impact of QoL on local policy decisions. QoL was measured between 2002 and 2008. Some city governments repeatedly observed community QoL during the period. The cities with several community QoL measures varied by year. Hence, a “city” represents the unit of analysis, while a “community QoL” indicates QoL in a city observed in a particular year. The full list of cities is provided in Appendix A.

In general, the common focus of community level QoL research is how people who lived in the city perceive the QoL in their own community. Many studies have measured QoL by asking questions like “how do you rate this city as a place to live?” and “how do you rate your QoL in a city?” (Grzeskowiak et al., 2003; McCrea et al., 2006; Sirgy et al., 2008; 2000), in addition to asking to “satisfaction with your neighborhood in your city” (Dunning et al., 2008; Grzeskowiak et al., 2003; McCrea et al., 2006; Mohan & Twigg, 2007). Consistent with previous research, QoL in this study is measured using a composite score of responses to three survey questions: citizen evaluation of “your city as a place to live”, “the overall quality of your neighborhood in your city”, and “the overall quality of life in your city.” Answers were based on a 4-point scale ranging from 1= excellent to 4= poor. These values were reversed for easier interpretation, and then the individual items were averaged to form a composite score for community QoL. The resulting QoL averages represent a reliable measure as indicated by a Cronbach’s alpha coefficient of .976.

**Table 4-1. Number of Municipalities in Survey**

Units	Survey Year							N
	2002	2003	2004	2005	2006	2007	2008	
State	10	11	13	13	16	19	20	32
Municipalities	12	15	16	21	27	39	36	95(167)*
Respondents	6,868	9,618	9,105	12,058	14,627	18,777	18,013	89,066

Note: \* The number in the parenthesis indicates the number of community QoL; see Footnote 22.

In addition, this study adopted the proportion of citizens who positively evaluate their community’s QoL as another QoL indicator for additional analysis. According to Peterson (1981), of the policy areas, implementing economic development (developmental) policies are most effective in keeping mobile citizens. Cities in which greater percentages of citizens



positively evaluate their community QoL are more likely to retain mobile citizens (Williams & Jobes, 1990). Of the three questions the National Citizen Satisfaction Survey used in calculating community QoL scores the question “how do you rate your overall QoL in your city?” is used. The percentage of positive answers about community QoL was derived by adding “excellent” and “good” responses to the question.

### ***3. Exogenous Variables***

*Citizen Political Ideology.* Many studies employ Democratic vote share as a proxy measure of partisan preferences at the state (Erikson et al., 1993) and at local (Choi et al., 2010; Hajnal & Trounstine, 2010; Percival et al., 2009) levels. Following these studies, this study also used the county-wide Democratic vote share in presidential and gubernatorial elections between 2002 and 2008 in examining whether local governments were responsive to partisan considerations and to public preferences. The county-wide Democratic vote share at time  $t$  was used to match spending data at time  $t + 1$ . The years that did not have a presidential or gubernatorial election were linearly interpolated.

Although the cross-sectional design of this study uses cities as the units of analysis, the county-wide data were taken from America Votes (vols. 25-28). The scholarly literature suggests that county-wide election data provide reasonable approximations of partisan preferences at the city level. Hajnal & Trounstine (2010) show that the correlation between city and county presidential votes for the largest 100 cities in the United States and for all California cities is .84.

*Economic Determinants.* To tap local economic conditions, extant research uses various proxies such as median household income (Basolo, 2000; Basolo & Huang, 2001), per capita income (Choi et al., 2010), government revenues (Hajnal & Trounstine, 2010), and

intergovernmental aid (Park, 1996; Percival et al., 2009). Of these, this study relied on the per capita income (PCI) of each city to measure the economic resources available to the city governments. The data were derived from the American Community Survey (ACS) (2002-2008) and the *(Community) Sourcebook of Zip Code Demographics* (2002-2008).

In addition, previous studies (e.g., Basolo, 2000; Choi et al., 2010; Hajnal & Trounstein, 2010; Schneider, 1989) use the number of contiguous jurisdictions to capture the level of inter-city competition. This study includes the number of incorporated places within each sample city's county area to tap the impact of city competition on local government expenditures. The data were taken from the *2002 Census of Governments*.

*Institutional Structures.* This study used the form of government to tap local institutional structures. The data on whether a city adopts the council-manager or the mayor-council form were derived from the 2002-2008 *Municipal Year Books*.

Additionally, to address the possibility that local government spending might be affected by fiscal constraints placed on city government by state laws, this study considered whether or not a state legal limitation on local property taxes exists. These data were obtained from *State laws governing local government structure and administration* (1993) of the U.S. Advisory Commission on Intergovernmental Relations (ACIR).<sup>23</sup>

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<sup>23</sup> This refers to millage limitations on ad valorem property taxes. To determine the reliability and validity of these data, they were compared to recent research (Anderson, 2006; Hoyt, Coomes, & Biehl, 2011; Mullins & Wallin, 2004) on property tax limitations. Although there are some differences between them [e.g., recent work does not report Virginia's legal limitation on local property taxes, while the ACIR report (1993) includes the constraint], there is no newly adopted property tax limitations applying to municipalities that are not found in the research of ACIR (1993).

*Demographic Characteristics.* The demographic characteristics of each city were measured by three indicators: racial homogeneity, proportion of elderly people, and population growth rate. These were measured by the percentage of white people,<sup>24</sup> the proportion of citizens older than 65, and population change over the last five years. The demographic variables were obtained from the American Community Survey (ACS) (2002-2008) and the Community Sourcebook of ZIP Code Demographics (2002 -2008).

#### **4. Instrumental variables**

*Governmental Actions.* QoL is affected by various public programs and services (Grzeskowiak et al., 2003; Sirgy et al., 2008) and government performance (Cogburn & Schneider, 2003; Yang & Holzer, 2006).<sup>25</sup> To capture citizens' evaluations of governmental actions in the community, the composite scores for Local Public Services and the Municipal Government Performance were obtained from the National Citizen Satisfaction Survey conducted by the National Research Center from 2002 through 2008.

The Local Public Services measure is a combination of responses to three questions about the local service quality of “Land use, planning and zoning,” “Garbage collection,” and “Services to seniors.” Municipal Government Performance is a composite score using four

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<sup>24</sup> Concern has been expressed about the “racial homogeneity” measure, since it uses “white people” as the base for tapping homogeneity. Some are concerned that doing so may imply that Caucasians are viewed as the “expected” (or even desired) race in the U.S., neither of which is my intention. I acknowledge as well that in some parts of the country and in many cities, there is less racial diversity but it is not because of Caucasian/Anglo dominance but rather due to larger percentages of African-Americans and Latino/as.

<sup>25</sup> The purpose of using instruments was not to provide information about the relative influence of the instruments on QoL but to predict community QoL with instruments that were unrelated to the dependent variable. It is not necessary to provide information on their validity from extant literature when using instruments, despite the fact as mentioned earlier that all instruments used in this study were chosen on the basis of their relevance to community QoL. Likewise, data measurements for instruments followed those of previous studies. The literature relevant to each instrumental variable appears on p.51.

survey questions: citizen evaluation of “the value of services for the taxes paid to the city,” “the overall direction that the city is taking,” “the job the city government does at welcoming citizen involvement,” and “the job the city government does at listening to citizens.” All responses were based on a 4-point scale ranging from 1= excellent to 4= poor. These values were reversed for interpretation. An analysis of internal consistency showed that citizens’ evaluations of Local Public Services and Municipal Government Performance are reliable, with Cronbach's alpha values of .928 and .958, respectively.

*Socio-economic Conditions.* The socio-economic conditions of each city were measured by per capita income (PCI) and property crime rate. Per capita income data were obtained from the American Community Survey (ACS) and the (*Community*) *Sourcebook of Zip Code Demographics* (2002-2008). Property crime rate was calculated by using the reported numbers of property crime in *Crime in the U.S.* (2002-2008). The crime rate for each city was described as property crime per 100,000 population.

*Demographic Characteristics.* The percentage of white people, population size, and the average household size were used as instrumental variables.<sup>26</sup> Data on the population and average household size were derived from the U.S. Census Bureau’s population estimates data, the American Community Survey (2002-2008), and the (*Community*) *Sourcebook of Zip Code Demographics* (2002-2008).

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<sup>26</sup> Although city populations were included at the initial stage, given the absence of a statistically significant relationship with QoL, I excluded city populations so as not to decrease the explanatory power of the chosen instrumental variables in the 2SLS regression.

**Table 4-2. Variable Descriptions**

Variables	Descriptions
<b>Dependent Variables</b>	
PC Devel. Exp.	Per capita developmental expenditure (\$)
PC Allo. Exp.	Per capita allocational Expenditure (\$)
PC Redis. Exp.	Per capita redistributive Expenditure (\$)
<b>Exogenous Variables</b>	
Political Ideology	Democratic vote share in the presidential & gubernatorial elections (%)
Per Capita Income	Per capita income of the city (\$)
City Competition	The number of incorporated places (city/town/village) within a county
Form of Gov.	1, if council-manager form; 0, mayor-council or other form.
Tax Limits	1, if State has constraints on local property tax limits; 0, if not
White	The percentage of White residents in a city (%)
Elderly	The percentage of citizens older than 65 in a city (%)
Pop. Growth Rate	Percentage change in population over the last 5 years (%)
Year (dummies)	Year dummies from 2002 to 2008 (reference)
<b>Endogenous Variable</b>	
Community QoL	Ranges from 1(excellent) to 4(poor); Subjective measure based on citizen perception of ‘city as a place to live’, ‘The overall quality of your neighborhood in your city’, & ‘The overall quality of life in your city’
QoL posi	The percentage of positive response (excellent and good) in the question of ‘The overall quality of life in your city’ (%)
<b>Instrumental Variables</b>	
Per Capita Income*	Per capita income of the city (\$)
Property Crime	Reported number of property crimes (per 100K)
HH size	The average household size of a city
White*	The percentage of White residents in a city (%)
Performance	Ranges from 1(excellent) to 4(poor); Subjective measure based on citizen perception of ‘city as a place to live’, ‘The overall quality of your neighborhood in your city’, & ‘The overall quality of life in your city’
Service quality	Ranges from 1(excellent) to 4(poor); Subjective measure based on citizen perception of ‘the quality of city zoning’, ‘The quality of garbage collection’ & ‘The quality of senior services’
Clear days	The percentage of sunny days a year

Note: \* Variable used as both exogenous and instrumental variables.

*Climates.* To indicate the natural condition of each city, this study used the percent of sunny days. The climate data were obtained from *Magazine Money's* 2008 climate data for U.S. cities. Table 4-2 includes descriptions of all variables.

### **C. Structural Equations**

This study sought to examine the effect of QoL, political, economic, institutional, and demographic factors on local policy decisions. Under the conditions of simultaneous causality between QoL and local spending, QoL is an endogenous variable. QoL was estimated by regressing the instrumental variables (a1) Local Public Services, (a2) Municipal Government Performance, (a3) clear days, (a4) per capita income, (a5) property crime rate, (a6) racially homogeneity, and (a7) average household size. The estimating equation for QoL [Eq. 1] is:

$$\text{Community QoL} = f(a_1, a_2, a_3, a_4, a_5, a_6, a_7) \quad \dots \text{ [Eq. 1]}$$

The other factors -- (b) political, (c) economic, (d) institutional, and (e) demographic factors -- are exogenous predictor variables. Each factor was measured by (b<sub>1</sub>) citizen political ideology; (c<sub>1</sub>) economic resources and (c<sub>2</sub>) city competition; (d<sub>1</sub>) form of government and (d<sub>2</sub>) state-imposed constraints on local property tax; and (e<sub>1</sub>) racial homogeneity, (e<sub>2</sub>) the proportion of elderly people, and (e<sub>3</sub>) population growth rate, respectively. Based on the explanatory variables, a set of year dummies ranging from 2002 (Y<sub>02</sub>) to 2007 (Y<sub>07</sub>) with the reference year (2008) was created to check for year-effects on local government spending. The dependent variable is per capita spending at time  $t + 1$ , and the other variables are measured at time  $t$ . The OLS estimating equation for city government spending [Eq. 2] is:

$$\text{Local spending}_{t+1} = g^t(a, b_1, c_1, c_2, d_1, d_2, e_1, e_2, e_3, Y_{02}, Y_{03}, Y_{04}, Y_{05}, Y_{06}, Y_{07})$$

..... [Eq. 2]

Solving for  $a$  in Equation 2, the following second-stage function is suggested:

$$\begin{aligned} &\text{Local government spending}_{t+1} \\ &= g^t[f^t(a_1, a_2, a_3, a_4, a_5, a_6, a_7), b_1, c_1, c_2, d_1, d_2, e_1, e_2, e_3, Y_{02}, Y_{03}, Y_{04}, Y_{05}, Y_{06}, Y_{07}] \end{aligned}$$

.....[Eq. 3]

Additionally, to examine the effect of each factor for distinct local policy areas, the study looked at three policy areas: developmental, allocational, and redistributive. The models to examine the effects were:

$$\begin{aligned} &\text{Expenditures on developmental policy functions}_{t+1} = h^t[f^t(a_1, a_2, a_3, a_4, a_5, a_6, a_7), b_1, c_1, \\ &c_2, d_1, d_2, e_1, e_2, e_3, Y_{02}, Y_{03}, Y_{04}, Y_{05}, Y_{06}, Y_{07}] \end{aligned}$$

.....[Eq. 4]

$$\begin{aligned} &\text{Expenditures on allocational policy functions}_{t+1} = i^t[f^t(a_1, a_2, a_3, a_4, a_5, a_6, a_7), b_1, c_1, c_2, \\ &d_1, d_2, e_1, e_2, e_3, Y_{02}, Y_{03}, Y_{04}, Y_{05}, Y_{06}, Y_{07}] \end{aligned}$$

.....[Eq. 5]

$$\begin{aligned} &\text{Expenditures on redistributive policy functions}_{t+1} = j^t[f^t(a_1, a_2, a_3, a_4, a_5, a_6, a_7), b_1, c_1, \\ &c_2, d_1, d_2, e_1, e_2, e_3, Y_{02}, Y_{03}, Y_{04}, Y_{05}, Y_{06}, Y_{07}] \end{aligned}$$

.....[Eq. 6]

Chapter 5 turns to the findings of these analyses.

## **Chapter 5 - Analysis and Results**

Before estimating the impact of community QoL on government spending, this chapter briefly examines descriptive statistics and regression diagnostics. The first section reports and interprets the descriptive statistics as well as the data transformation. Then, the second section explores various regression assumptions such as endogeneity, instrument relevance and exogeneity issue, heteroscedasticity, and multicollinearity. The third section provides and interprets the results of estimations using two stage least squares (2SLS) for developmental spending and ordinary least squares (OLS) for allocational and redistributive expenditures. In addition, to examine the threshold effect of community QoL on city spending, regression estimations were run on a subsample with varying city income levels. Finally, using simulations based on the regression results to provide a better sense of the magnitude of various influences, the substantive impact of each variable is examined. The results show the significant roles that political, economic, bureaucratic, and institutional considerations, as well as community QoL play, in local policy decisions.

### **A. Descriptive Analysis**

Table 5-1 displays a list of the variables used to estimate effects on local spending. Before estimating the effect on local spending, data transformations were made to satisfy OLS assumptions. Depending on the type of data (percents, proportions, probabilities vs. ratio scales), this study made several transformations (Peck, Olsen, & Devore, 2008). First, the logistic transform was used for proportional data where the probability of an event ranges from 0 to 1 (or



the percentages ranged between 0 and 100).<sup>27</sup> Logistic transformations were applied to the proportion (or percentages) of white, elderly, clear days, and positive QoL responses.

**Table 5-1. Variable Transformations**

Variables	Data Transformation	Variables	Data Transformation
Dependent Var.		Endogenous Var.	
PC Devel. Exp.	Logarithm	Community QoL	-
PC Allo. Exp.	Logarithm	Positive QoL Answers	Logistic
PC Redis. Exp.	Log (pc Redis. exp + 1.877)		
Exogenous Var.		Instrumental Var.	
Political Ideology	-	Property Crime	Logarithm
PC Income	Log (PCI - 14050.6)	PC Income*	Log (PCI - 14050.6)
City Competition	Logarithm	White*	Logistic
Form of Gov.	-	HH size	Inverse
Tax Limits	-	Performance	Cubed
White	Logistic	Service quality	-
Elderly	Logistic	Clear days	Logistic
Pop. Growth Rate	Logarithm		

Note: \* indicates instrumental variables that are also used as exogenous variables.

For other types of data, cubed, logged, and inverse transformations were used depending on whether the distribution is skewed negatively or positively (Tukey, 1977). To normalize negatively skewed variables, a cubed transformation was taken for the variable, Citizen Evaluation of the local government's performance. The logarithm was taken for the positively skewed distributions (e.g., local spending, the number of incorporated cities). To guarantee that

<sup>27</sup> Logit ( $p$ ) =  $\log(p/(1-p))$ . If the proportion data are 5% ( $p=.05$ ), 50% ( $p=.50$ ), and 95% ( $p=.95$ ), the values of the logit transform will be -2.944, 0, and 2.944, respectively. Hence, the negative values of white, elderly, clear days, and positive QoL responses in the transformed descriptive statistics in Table 1 mean that the proportion or percentages are less than 50% (or  $p<.50$ ).

the logged transformations are mathematically legitimate,<sup>28</sup> if the minimum value is a negative number, I add the absolute value of the minimum value plus one before logging (e.g., population growth + 9).

Additionally, in the cases where logged transformations could not make variables normally distributed, Stata's zero skewness logged function<sup>29</sup> was used, which moved the distribution is closer to the normal distribution. Per capita income, per capita redistributive spending, and population size were transformed by the zero skewness logged technique, in which values are logged after adding -14,050.6, 1.877, and -24,980.12 to each value, respectively. Lastly, for the flat distributed variable, household size, an inverse transformation was applied. Table 5-1 summarizes the data transformations used in this study.

Table 5-2 presents descriptive statistics after transforming the data. Local government spending among the policy types is substantially different. Average per capita allocational policy spending (\$1,462.54) is the largest proportion of local government spending across the three categories this study examined. City governments spend an average of 65.3% of their budgets on allocational policy functions. Developmental spending (\$724.03 per capita) is far from dominating local government expenditures. Expenditures on developmental policy functions amount to 32.3% of local budgets, on average. At the same time, of all the money local governments have to spend, on average 2.4% is directed toward redistributive policy. Spending on redistributive policy functions (\$52.63 per capita) accounts for only a slight portion of the

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<sup>28</sup> As the logarithm of any negative number is undefined, if a variable contains values that are less than 1.0, a constant must be added to move the minimum value of the distribution, preferably to 1.00. In other words, the logarithm transformation can be applied only to data that are strictly positive (Peck, Olsen, & Devore, 2008).

<sup>29</sup> In general, data transformation seeks to change only the mean, not the standard deviation or variance. The transformation was achieved by log transformation after adding a constant. This type of transformation is described in the classic regression book by Mosteller & Tukey (1977), where adding a constant is called a starting value.

average city budget. The descriptive statistics suggest that a big part of the job of local governments is to deliver basic services to their residents.

**Table 5-2. Descriptive Statistics**

Variables	N	Untransformed				Transformed			
		Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
pc_D_exp	167	724.03	734.90	56.07	4,141.01	6.21	0.85	4.03	8.33
pc_A_exp	167	1,462.54	713.46	424.51	3,919.58	7.17	0.48	6.05	8.27
pc_R_exp	167	52.63	84.95	0	403.93	3.30	1.17	0.63	6.01
Demo. votes	167	53.98	11.09	21.8	79.2	53.98	11.09	21.80	79.20
PCI	167	30,113.38	11,537.46	15,856	70,400	9.46	0.68	7.50	10.94
Incor. cities	167	21.72	30.18	1	150	2.47	1.14	0	5.01
Form of gov.	167	0.88	0.33	0	1	0.88	0.33	0	1
Tax Limit	167	0.89	0.31	0	1	0.89	0.31	0	1
White	167	75.21	13.54	32.7	96.6	1.26	0.81	-0.72	3.35
Elderly	167	12.74	5.95	2.59	37.92	-2.01	0.49	-3.63	-0.49
Pop. growth rate	167	12.73	17.88	-5.5	94.05	2.83	0.68	1.25	4.64
Community QoL	167	2.99	0.28	2.05	3.56	2.99	0.28	2.05	3.56
QoL_posi	167	0.74	0.15	0.1707	0.972	1.24	0.91	-1.58	3.53
Property crime	167	3,920.64	1,793.02	575.95	9,269.10	8.17	0.48	6.36	9.13
HH size	167	2.57	0.28	2.04	3.44	0.16	0.03	0.08	0.24
Performance	166	2.54	0.25	1.54	3.05	16.76	4.55	3.65	28.34
Service Quality	167	2.67	0.24	2.02	3.29	2.67	0.24	2.02	3.29
Clear days	167	31.28	11.09	16	58	-829	.51	-1.65	.32

This spending pattern is similar to that found by other studies. Choi et al. (2010) report that county governments in Florida spend on average 25.8%, 67%, and 7.2% of their resources on developmental, allocational and redistributive policy categories, respectively. In general, county governments have taken greater responsibility from higher-level governments in delivering public services (Benton, 2005). The variation of redistributive spending between city and county governments is reasonable. Schneider & Park (1989) find that on average 27% and 3.1% of city budgets in 1982 were allocated for developmental and redistributive policy.

Following Peterson's (1981) categorization,<sup>30</sup> in which allocational spending is placed between developmental and redistributive spending, about 60% of expenditures on average were directed toward allocational programs.

The descriptive characteristics captured in Table 5-2 suggest a general picture of the cities examined in this study. The cities on average lean toward the Democratic Party. County-wide Democratic presidential and gubernatorial vote averaged 53.98%, ranging from 21.8% to 79.2%. Per capita income of each city on average was over \$30,000. Each city has about 20 neighboring municipal governments within a county. Many of the cities in the sample have adopted a council-manager form of government, and they are bound by state-imposed constraints on local property tax rates. The average percentage of white residents was 75.21%, and the percentage older than 65 was 12.74%. The mean annual population growth rate over the last five years was 12.73%.

Table 5-2 shows that in many cities, residents positively evaluated community circumstances. The mean Community QoL score was almost 3.00, which represents a "good" community QoL. Seventy-four percent of residents in each city positively assess community QoL. Meanwhile, the residents are less positive about government actions. The mean scores on performance and public service quality were 2.54 and 2.67, respectively. Meanwhile, in these cities, the average property crime rate was 3,920 and mean household size was 2.58.

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<sup>30</sup> As previously noted, Peterson (1981) suggests a middle classification for allocational programs and services that have "neither much of a positive nor much of a negative effect on the local economy" (p.44).

## B. Regression Diagnostics

I expected that community QoL ( $t$ ) and spending decisions ( $t+1$ ) would affect each other within one budget period. The endogeneity allows 2SLS to provide more efficient estimators. However, when there is no endogeneity in the structural model, the 2SLS estimator is less efficient than OLS (Baum, 2006; Wooldridge, 2008). Four potential statistic issues with the data and available estimation procedures were explored. The following diagnostics were tested: endogeneity (bi-directional influence of dependent and independent variables), choice of instruments (instrument relevance & instrument exogeneity issue), heteroscedacity (the presence of a non-random pattern in the residual error terms), and multicollinearity (the presence of inter-relationships among the independent variables). Table 5-3 and Table 5-4 summarize the results of the diagnostics.

**Table 5-3. Regression Diagnostics for the Community QoL Score**

Assumption Test	Developmental Spending Model	Allocational Spending Model	Redistributive Spending Model
Endogeneity Test – $\chi^2(1)$	3.338 (.068)*	2.33 (.127)	1.755 (.185)
Relevance ( $F$ -value)	40.61 (.000)	40.61 (.000)	40.61 (.000)
Overid. Restriction Test - $\chi^2(4)$	3.306 (.508)	19.456 (.000)	15.990 (.004)
The Breusch-Pagan Test – $\chi^2(1)$	13.43 (.000)	0.02 (.895)	0.02 (.657)
The Pagan-Hall Test – $\chi^2(19)$	36.198 (.010)	15.841 (.668)	20.194 (.383)
Multicollinearity Test (mean VIF)	1.55	1.55	1.55

Note: \*  $p$ -values are in parentheses; because the same explanatory and instrumental variables appeared in the three models, the results of the instrument relevance and multicollinearity tests are the same in all three.

**Table 5-4. Regression Diagnostics for the Proportion of Positive QoL**

Assumption Test	Developmental Spending Model	Allocational Spending Model	Redistributive Spending Model
Endogeneity Test – $\chi^2(1)$	5.276 (.022)*	1.364 (.243)	.986 (.321)
Relevance ( <i>F</i> -value)	33.01 (.000)	33.01 (.000)	33.01 (.000)
Overid. Restriction Test – $\chi^2(4)$	3.325 (.505)	19.287 (.000)	15.805 (.003)
The Breusch-Pagan Test – $\chi^2(1)$	12.15 (.001)	0.04 (.835)	0.12 (.728)
The Pagan-Hall Test – $\chi^2(1)$	34.026 (.018)	15.669 (.679)	20.609 (.359)
Multicollinearity Test (mean VIF)	1.55	1.55	1.55

Note: \* *p*-values are in parentheses; because the same explanatory and instrumental variables appeared in the three models, the results of the instrument relevance and multicollinearity tests are the same in all three.

### ***1. Endogeneity***

As just mentioned, in the absence of endogeneity, the 2SLS estimator is less efficient than OLS. Although the models in this study turn on the joint determination of spending decisions and community QoL, it remained desirable to identify bi-directional influence statistically in order to enhance confidence that endogeneity exists.

The Hausman test is the most frequently used test to detect endogeneity by checking whether a suspected endogenous variable is correlated with the error term. The null hypothesis is that there is no simultaneity. In this study, the predicted residual of the reduced form (Equation. 1) was included as a regressor in OLS estimations of each spending model (Equation 4, 5, and 6).

Table 5-3 and Table 5-4 show the results of a  $\chi^2$  test of endogeneity with the community QoL score and the proportion of positive QoL responses. The null hypothesis of no endogeneity was rejected for the developmental spending models ( $p < 0.10$ , with community QoL score &  $p < 0.05$ , with the proportion of positive QoL responses). The results demonstrate that there is a feedback loop between community QoL variable and the error term for developmental spending.

For the allocational and redistributive spending models, however, the null hypothesis is not rejected even at the .1 level. The results suggest that, contrary to the developmental spending models, there is no simultaneous relationship between community QoL and city government spending on allocational and redistributive policy. In these unidirectional relationships between community QoL and local expenditures, it is preferable to use OLS to estimate the impact of community QoL on allocational and redistributive spending decisions.

## ***2. Choice of Instruments***

The first stage of 2SLS is to generate the proxy to replace a problematic variable using instrumental variables. For efficient 2SLS estimation, it is critical to find an instrumental variable that determines an endogenous variable in the structural model, but that does not affect the dependent variable. In other words, a good instrumental variable meets two conditions: it must be highly correlated with the endogenous variable (instrument relevance issue), and it must not be correlated with the disturbance term of the dependent (instrument exogeneity issue). If a variable is a valid instrument, the coefficients on the explanatory variables obtained from 2SLS estimation will be unbiased (Baum, 2006).

The relevance of the instruments can be tested in the first-stage regression (Baum, 2006). The first stage regression is the reduced form regression of the endogenous variable, community QoL, on the full set of instruments including all instrumental and exogenous variables. The statistics of the instrument relevant test <sup>31</sup> here relate to the explanatory power of the chosen

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<sup>31</sup> A commonly used statistic is the  $R^2$  of the first-stage regression measured by “squared partial correlation” between the instrumental variables and the endogenous regressor in the equation, which is the marginal contribution of the chosen explanatory variable (instrumental variables, here) when all others are already included in the regression model (Wooldridge, 2008).

instrumental variables in the regression. This is expressed in the  $F$ -test of the joint significance of the instrumental variables in the first stage regression.<sup>32</sup>

In Table 5-3, the  $F$ -statistic of a joint test for the model with the community QoL score is 60.61 ( $p < .000$ ). For the model using the proportion of positive QoL responses is 33.01 ( $p < .000$ ) in Table 5-4. The instrumental variables chosen for community QoL in this 2SLS regression model meet the condition of instrument relevance. The results provide that the instruments are highly correlated with community QoL even after controlling for the exogenous regressors.

With regard to instrument exogeneity issue, if a 2SLS equation is overidentified,<sup>33</sup> it is possible to test the overidentifying restrictions to see whether the instrumental variables are correlated with the error term. A test of overidentifying restrictions regresses the residuals from a 2SLS regression on all instruments. Under the null hypothesis that all instruments are uncorrelated with the error term, the test has a large-sample  $\chi^2(r)$  distribution where  $r$  is the number of overidentifying restrictions.

In Table 5-3 and Table 5-4, the results of a  $\chi^2$  test for overidentification restrictions indicate that the null hypothesis was not rejected for the developmental spending models (both QoL indicators – ratio and proportion data) at either the .1 level or .05 level. These results allow for the validity of the instrumental variables for developmental spending models. However, the null hypothesis of the overidentification restriction test was rejected for the allocational and redistributive spending models. These results suggest that the instrumental variables used to

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<sup>32</sup> Generally, an  $F$  statistic over 10 is required to suggest that instruments are sufficiently strong in the case of a single endogenous regressor (Gujarati, 2009).

<sup>33</sup> In a model of  $M$  simultaneous equations, an equation must exclude at least  $M-1$  of all of the variables in the entire model in order to be identified. In this study, because the number of instrumental variables are more than the number of endogenous variables (only one, community QoL), the spending equation model is overidentified.



estimate community QoL were not able to meet the condition of instrument exogeneity for the allocational and redistributive spending models.

### ***3. Heteroscedasticity***

As other regression models, 2SLS must meet other assumptions for OLS regression. One of the main assumptions for OLS regression is the homogeneity of variance of the residuals. If the variance of the residuals is non-constant, then the residual variance is said to be heteroscedastic. In other words, heteroscedasticity is a condition where the variability in the residual error terms is not constant for all values of the explanatory variables (Baum, 2006). There are graphical and non-graphical methods in detecting heteroscedasticity. In this study, the Breusch-Pagan test was used to detect any linear form of heteroscedasticity for the OLS estimation, Equation 2, in the three policy areas. In addition, for instrumental variables (IVs) estimation, the Pagan-Hall test of heteroscedasticity was performed on Equation 4, 5, and 6. Under the null hypothesis that the error variances are all equal, a large  $\chi^2$  would indicate that heteroscedasticity was present in both heteroscedasticity tests.

As Tables 5-3 and 5-4 show, the results of a  $\chi^2$  test for heteroscedasticity indicate that the null hypothesis of both tests was rejected for the developmental spending models (both QoL indicators – score and proportion data) at the .01 level. These results suggest that the error variances of the developmental spending models are a multiplicative function of one or more variables, which causes standard errors to be biased. Hence, given the presence of heteroscedasticity in the developmental spending models, this study reports the estimates of the models using robust standard errors.

However, the  $\chi^2$  values of the allocational and redistributive spending models were fairly small, and the null hypothesis could not be rejected at any reasonable level of confidence. In the allocational and redistributive spending models, heteroscedasticity probably was not a problem, and the models were estimated using conventional standard errors.

#### **4. Multicollinearity**

Multicollinearity exists when there is a linear relationship between two independent variables. When there are perfect linear relationships, the regression coefficients of regressors are indeterminate and their standard errors are not defined; when linear dependencies among the independent variables are almost exact, then the standard errors may be large (Gujarati, 2009). This means the estimated coefficients may not be accurate or precise. Multicollinearity was detected in the models and its severity diagnosed with two tools.

First bivariate correlation coefficients for the instrumental and for the explanatory variables were reviewed for high values. Table 5-5 includes the correlations among instrumental variables that were independent variables used in Equation 1, and Table 5-6 reports correlations among all variables used in the second stage. Any pairwise correlation with an absolute value that is not greater than .7 signaled that multicollinearity was not a problem.

**Table 5-5. Correlations among Instrumental Variables**

N=166	1	2	3	4	5	6
1 PCI	-					
2 Property Crime Rates	-.298	-				
3 White	.081	-.272	-			
4 Average HH size	.238	.101	.295	-		
5 Performance	.233	-.266	.075	-.243	-	
6 Service Quality	.405	-.274	.018	-.164	.540	-
7 Clear Days	.196	.049	-.223	-.194	.100	.001

Note: Pearson correlation values are reported; transformed data is used; \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

**Table 5-6. Correlations among Explanatory Variables in Equation 2**

<i>N</i> = 167	1	2	3	4	5	6	7	8	9	10	11
1 pc_d_exp	-										
2 pc_a_exp	.452	-									
3 pc_r_exp	.163	.393	-								
4 Form of gov	-.029	.002	-.265	-							
5 Tax Limit	-.203	.198	-.042	-.009	-						
6 Demo. votes	.034	.243	.249	-.130	.005	-					
7 PC Incom	.086	.364	-.005	.140	.074	.241	-				
8 Incor. cities	-.274	-.125	-.276	.189	-.016	.166	.249	-			
9 White	-.146	-.127	-.246	.007	.136	-.145	.081	.013	-		
10 Elderly	.178	.144	-.022	.176	.089	-.058	.169	-.041	.153	-	
11 Pop. growth	-.007	-.217	-.299	.002	.038	-.388	-.302	-.288	.240	-.056	-
12 Community QoL (logistic_QoL)	.071 (.060)	.261 (.246)	-.134 (-.147)	.157 (.163)	.097 (.102)	.138 (.124)	.698 (.688)	.172 (.184)	.327 (.320)	.090 (.015)	-.098 (-.106)

Note: Pearson correlation values are reported; transformed data were used; \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Second, I examined the variance-inflation factors (VIF).<sup>34</sup> As a rule of thumb, a variable whose VIF values are greater than 10 (or over 5; authors differ) may suggest that the variable is multi-collinear with others in the model and may need to be dropped. Given that 2SLS can be described intuitively as involving two successive applications of OLS, the VIF for Equations 1 and 2 were reviewed. In the first stage, the mean VIF is 1.49, with VIF values ranging from 1.29 to 1.71. In the second stage, the mean VIF is 1.55, and VIF values of the independent variables range from 1.06 to 2.56. The results of the two diagnostics indicate there are no multicollinearity problems in the models.

In summary, the developmental spending model shows that developmental spending and community QoL are simultaneously determined. The predetermined instrumental variables are valid in term of the exogeneity of the error terms and the relevance of the endogenous variable; a two-stage least squares (2SLS) estimation of Equation 4 is appropriate to examine the impact of

<sup>34</sup> The VIF is an index of the impact of collinearity on the precision of estimation.  $VIF = 1/(1-R^2)$

community QoL on developmental spending. Meanwhile, given the presence of heteroscedasticity in the developmental spending model, a heteroscedasticity correction, robust standard errors, was adopted.

In contrast, the allocational and redistributive spending models show homogeneity of variance of the residuals. The conditions of endogeneity and exogenous instruments for using 2SLS are not satisfied. Hence, the effect of community QoL on allocational and redistributive spending was examined by using ordinary least squares (OLS) estimation of Equation 2. Lastly, the results show that no multicollinearity problems in any of the models.

### **C. Regression Results**

To examine the relevance of each spending determinant, the results of OLS estimation of the reduced form equation, Equation 1, for community QoL are presented first. Then, the impact of each variable on spending for the three policy types is estimated by 2SLS for developmental spending and by OLS for allocational and redistributive spending. The results show that all factors including community QoL shape local government decisions. The estimation models are extended to sub-samples that vary by city income levels to examine whether there is a threshold effect of community QoL on city spending. With the general and sub-sample, the magnitudes of the effects are examined by simulation that moves each variable from its 25th percentile to its 75th percentile.

#### ***1. First Stage Model***

The results of OLS estimation of the reduced form equation for community QoL are presented in Table 5-7. The model explains about 78 percent and 76 percent of the variance in

community QoL scores and proportion of the positive community QoL responses, respectively.

Of the seven instruments used, all achieve statistical significance in the reduced form model.

**Table 5-7. First Stage Regression Results**

Instruments	Community QoL (Scale)		Positive QoL responses (%)	
	Coef.	Robust SE	Coef.	Robust SE
PCI (logged)	0.165	0.021***	0.562	0.073 ***
Property crime rate (100k)	-0.092	0.029***	-0.265	0.102**
White (racial homogeneity)	0.071	0.016***	0.231	0.051***
Average Household size	1.220	0.460***	2.972	1.556*
Public Performance	0.012	0.004***	0.055	0.013***
Public Service Quality	0.404	0.071***	1.066	0.263***
Clear Days (%)	0.043	0.020**	0.112	0.073
N	166		166	
<i>F-value</i>	81.76		78.91	
<i>R</i> <sup>2</sup>	0.777		0.7613	

Note: Unstandardized coefficients and robust standard errors are reported; \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

The relationships between the endogenous variable and its instruments in each model are admittedly conjectural, and alternatives can be hypothesized. However, the purpose of the first stage estimation is not to provide information on the complex and relative influence of the instruments, but to predict community QoL with instruments that are unrelated to the dependent variable in the second stage. This objective is clearly met with evident explanatory power, supported on theoretical grounds and by statistical diagnostics.

## ***2. Direct Effects***

The effect of QoL on local government expenditures was estimated by two-stage least squares (2SLS) for developmental spending and by ordinary least squares (OLS) for allocational and redistributive spending. Table 5-8 shows the results of regressing each of the three categories

of expenditure (developmental, allocational, and redistributive expenditures) on the extensive list of independent variables described earlier. In each model, the regression equations fit the data fairly well, with  $R^2$  values ranging from .232 to .365. As Table 5-9 indicates, using the proportion of positive community QoL responses as the dependent variable, the regression equations also provide a relatively good fit to the data, with  $R^2$  values ranging from .228 to .364. The results of the regressions are quite similar.

**Table 5-8. Estimates for Local Government Expenditures: Community QoL Score**

Variables	Developmental Exp. (2SLS)		Allocational Exp. (OLS)		Redistributive Exp. (OLS)	
	Coef.	Robust SE	Coef.	SE	Coef.	SE
Community QoL	0.083	0.392	0.374**	0.170	- 0.389	0.431
Demo. votes	0.004	0.006	0.004	0.003	0.016**	0.008
PCI	0.163	0.138	0.105	0.070	0.094	0.177
Incorporated cities	- 0.218***	0.046	- 0.101***	0.029	- 0.358***	0.072
Form of Gov	- 0.142	0.208	- 0.104	0.102	- 0.627**	0.259
Tax Limit	- 0.623**	0.272	0.292***	0.098	- 0.085	0.247
White	- 0.171*	0.091	- 0.113***	0.042	- 0.170	0.106
Elderly	0.335***	0.125	0.100	0.065	0.016	0.165
Pop. Growth	0.045	0.114	- 0.079	0.052	- 0.523***	0.132
dum_02	- 0.317	0.297	- 0.396***	0.140	- 0.008	0.354
dum_03	- 0.149	0.242	- 0.294**	0.118	0.012	0.299
dum_04	- 0.132	0.276	- 0.196*	0.115	0.072	0.292
dum_05	0.251	0.201	- 0.005	0.112	0.079	0.283
dum_06	0.147	0.194	- 0.165	0.101	0.118	0.256
dum_07	0.027	0.214	0.057	0.092	0.047	0.233
<i>N</i> =	166		167		167	
<i>F-value</i>	4.01***		5.79***		4.61***	
$R^2$	0.232		0.365		0.314	

Note: Unstandardized coefficients and robust standard errors are reported for developmental spending; conventional standard errors are reported for allocational and redistributive spending; \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

**Table 5-9. Estimates for Local Government Expenditures: Positive QoL Answers**

Variables	Developmental Exp. (2SLS)		Allocational Exp. (OLS)		Redistributive Exp. (OLS)	
	Coef.	Robust SE	Coef.	SE	Coef.	SE
posi_QoL	0.001	0.126	0.110**	0.052	- 0.145	0.131
Demo. votes	0.004	0.006	0.004	0.003	0.016*	0.008
PCI	0.186	0.144	0.108	0.070	0.120	0.176
Incorporated cities	- 0.218***	0.046	- 0.101***	0.029	- 0.358***	0.072
Form of Gov	- 0.135	0.213	- 0.107	0.103	- 0.613**	0.260
Tax Limit	- 0.622**	0.273	0.289***	0.098	- 0.079	0.247
White	- 0.164*	0.092	- 0.113***	0.042	- 0.161	0.107
Elderly	0.331**	0.131	0.116*	0.067	- 0.011	0.168
Pop. Growth	0.047	0.114	- 0.075	0.052	- 0.526***	0.132
dum_02	- 0.315	0.297	- 0.400***	0.140	0.000	0.354
dum_03	- 0.144	0.243	- 0.300**	0.119	0.025	0.300
dum_04	- 0.132	0.276	- 0.193*	0.116	0.068	0.292
dum_05	0.250	0.201	- 0.003	0.112	0.076	0.283
dum_06	0.146	0.192	- 0.171*	0.101	0.125	0.256
dum_07	0.018	0.213	0.050	0.091	0.045	0.231
<i>N</i> =	166		167		167	
<i>F</i> -value	3.97***		5.77***		4.65***	
<i>R</i> <sup>2</sup>	0.228		0.364		0.316	

Note: Unstandardized coefficients and robust standard errors are reported for developmental spending; conventional standard errors are reported for allocational and redistributive spending; \**p* < .10, \*\**p* < .05, \*\*\**p* < .01.

*Community QoL (H1a, H1c, & H1e).* The results show that community QoL has no statistically significant impact on developmental ( $\beta = .083$  &  $.001$ , n.s.) or redistributive expenditures ( $\beta = -.389$  &  $-.145$ , n.s.). These findings contradicted *Hypothesis<sub>1a</sub>*: *The level of QoL is likely to be positively associated with developmental spending at the city level* and *Hypothesis<sub>1e</sub>*: *The level of QoL is likely to be negatively associated with redistributive spending at the city level.* The non-significant relationships may result from lack of responding citizens'

demands for each policy function, but they also may be due to non-linear relationships between community QoL and governmental spending as hypothesized in *H1b*, *H1d*, & *H1f*. The detailed relationships will be discussed in the next section after examining whether the effects varied by city income levels.

However, community QoL has a statistically significant positive relationship with allocational spending ( $\beta = .374 \text{ \& } .110, p < .05$ ). These results support *Hypothesis<sub>1c</sub>*: *In general, the level of QoL is likely to be positively associated with allocational spending at the city level.* Cities with higher QoL levels (in which a greater percentage of citizens positively evaluate their QoL) are likely to spend more on allocational policies. Given the fact that the allocational policy arena receives the largest proportion of budget expenditures<sup>35</sup> and allocational programs are viewed as widely and proportionally benefiting a city, these results may reflect that local governments are in general responsive to citizen needs. This finding provides evidence of the linkage between citizen needs and governmental actions at the local level.

Additionally, the finding contradicts Peterson's (1981) perspective on the impact of local politics. In *City Limits*, Peterson (1981) argues that although locational politics<sup>36</sup> creates room for urban politics,<sup>37</sup> local policy decisions are predominantly shaped by economic considerations

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<sup>35</sup> The city governments that this study analyzed spend an average of 65.3% of their budgets on allocational policy functions.

<sup>36</sup> As Peterson (1981) describes the characteristics of the allocational policy arena, the marginal economic benefits of the allocational services for the city as a whole are more or less neutral, but the policies disproportionately benefit citizens of the service location. He argues that competition over services' locations allows the allocational arena to create room for urban politics.

<sup>37</sup> From this standpoint, Schneider & Teske (1992) examine the relationship between the emergence of a local entrepreneur and the size of slack budgetary resources measured by allocational expenditures. They found that the size of allocational expenditures is the most important variable affecting the emergence of a political entrepreneur who propels dynamic policy or political change in the community. This finding supports that the view contrary to developmental and redistributive policy arena, the allocational policy arena is the most free of political limits in local policy decisions, and is the most susceptible to local politics.



ahead of any other concerns. Consequently, local political factors are not important. Contrary to this argument, the results suggest that citizen demands for allocational services, tapped by community QoL, may overwhelm economic considerations in local policy decisions. Given that various citizen interests exist in the allocational policy arena, policy choices often align with competing values and limited economic resources.<sup>38</sup> In considering various community interests, group competition is likely to occur more commonly over service location, specific service types, or even the level of public services. The finding here supports the view that local politics occupies a substantial place in policy decisions.

*Political Consideration (H2a & H2b).* Tables 5-8 and 5-9 show that citizens' political ideology [Demo votes] is positively associated with redistributive spending ( $\beta = .016$ ,  $p < .05$  in Table 5-8 &  $\beta = .016$ ,  $p < .10$  in Table 5-9). These results are consistent with *Hypothesis<sub>2b</sub>*: *Liberal political ideology will have a positive impact on redistributive spending at the city level.* Cities with more Democratic-leaning populations are more apt to spend money on redistributive programs such as welfare, health services, and public housing. Political ideology plays a considerable role in determining how local governments spend their money. Political conflict may be higher in redistributive programs, where the programs are intended to disproportionately benefit less privileged people in the community (Swanstrom, 1988). Contrary to the economic determinism perspective, the results suggest that there is some room for local politics in city policy decisions. Dahl's (1961) assertions about the relevance of the public in local democracy gain considerable support from this finding.

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<sup>38</sup> Allocational functions include a wide array of needs and wants based on various city amenities such as public safety, parks and recreation services, conservation of natural environments, sanitation, and emergency management as well as necessary housekeeping services. Chapter 6 returns these services.

However, the results show that city government spending on developmental ( $\beta = .004$ ) and allocational policy functions ( $\beta = .004$ ) is insignificantly related to party, contrary to *Hypothesis<sub>2a</sub>: Liberal political ideology will have a positive impact on allocational spending at the city level.* The lack of statistical significance may reflect that political ideology at least as tapped by state and national party electoral support plays a less critical role in determining the level of public services. On decisions about spending money to clean streets or provide a recreation facility, there may be few differences between local Democrats and Republicans. Local politics that reflects partisan divisions may be limited to redistributive policy areas at the city level.

*Economic Determinism (H3a – H3d).* City competition [incorporated cities] is negatively associated with city government spending. The relationship is strong and consistent across all three types of policies expenditures: developmental ( $\beta = -.218, p < .01$ ), allocational ( $\beta = -.101, p < .01$ ), and redistributive spending ( $\beta = -.358, p < .01$ ). This suggests that as jurisdictional competition increases in a county, city governments are less likely to spend. The results are consistent with *Hypothesis<sub>3b</sub>: Cities surrounded by higher number of local governments will spend less on redistributive policy functions,* but do not support *Hypothesis<sub>3a</sub>: Cities surrounded by higher number of local governments will spend more on developmental policy functions.*

This finding clearly demonstrates that the number of neighboring governments affects local policy decisions. Previous studies have found that policy choices and economic characteristics of a city's jurisdictional neighbors influence its own spending levels (Minkoff, 2009). Unlike the economic determinism perspective, city competition most likely does not facilitate, but rather suppresses government expenditures in all policy areas. This may reflect that

having numerous jurisdictional neighbors can provide a local government with various policy options such as contracting out, cost sharing programs, or collaborative projects. Politics among local governments such as local coalitions probably also has an impact on city policy decisions (Schneider, 1989).

Additionally, Table 5-8 and Table 5-9 show that local economic resources measured by per capita income are not significantly associated with any of the all three types of policy expenditures: developmental ( $\beta = .163$ ), allocational ( $\beta = .105$ ), and redistributive spending ( $\beta = .094$ ). The results contradict the expectations of this study (*Hypothesis<sub>3c</sub>: City governments with greater economic resources will spend more on developmental policy functions* and *Hypothesis<sub>3d</sub>: City governments with greater economic resources will spend more on allocational policy functions*). However, although the results are not statistically significant, the statistics for influence of per capita income on allocational spending ( $z$ -value = 1.55;  $p = 0.121$ ) are close to critical values. It is hard to say that economic resources do not affect local policy decisions at all, especially given the small sample used in this study.

In additional analysis to examine the relative influence of economic resources, as well as other factors across policy areas, the relative impact of economic resources on allocational spending was as substantial as the block of institutional factors.<sup>39</sup> The substantial and positive relationship between economic resources and government spending on allocational policy areas is consistent with previous research (e.g., Basolo, 2000; Choi et al., 2010; Hajnal & Trounstone, 2010; Park, 1996; Percival et al., 2009; Schneider, 1989; Wong, 1990). It may reflect that cities with greater economic resources are likely to expand their spending on allocational policy functions. The finding is consistent with Wagner's (1958) law that economic growth stimulates

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<sup>39</sup> The result regarding the relative influence of the economic resources across policy areas is reported in Table 5-10.

demands for public services such as law and order, public welfare, waste disposal, and the routine services undertaken by local agencies.

*Institutional Structures (H4a-H4d).* The form of local governments [Form of Gov] is negatively associated with city government expenditures, but only one of the relationships is statistically significant at the level of .05; developmental ( $\beta = -.142$ , &  $-.135$ , n.s.), allocational ( $\beta = -.104$  &  $-.107$ , n.s.), and redistributive spending ( $\beta = -.627$  &  $-.613$ ,  $p < .05$ ). The results indicate that a council-manager government is likely to spend less on redistributive policy functions than mayor-council governments. This supports *Hypothesis<sub>4c</sub>: Cities with the council-manager form will spend less on redistributive policy functions.* It is consistent with previous studies that the reformed city government form leads public officials to pursue efficiency, which results in less government spending (Benton, 2005; Choi et al., 2010; Lubell et al., 2005).

State-imposed restrictions on local property taxes [Tax Limits] also evidently shape local government spending decisions. Property tax limits have a negative impact on developmental spending ( $\beta = -.623$ ,  $-.622$ ;  $p < .05$ ) and a positive impact on allocational expenditures ( $\beta = .292$ ,  $.289$ ;  $p < .01$ ). The results support *Hypothesis<sub>4d</sub>: Cities with more state-imposed constraints on local tax will spend more on allocational policy functions.* The results may reflect that state-imposed constraints lead cities to invest their resources in legally required functions, allocational policy areas. The more state restrictions affect local government spending and fundraising, the less local governments are able to control the direction of their own spending.

Additionally, the negative relationship with developmental spending indicates that state-imposed constraints drive local resources away from developmental functions. If the state-imposed constraints represent smaller funded or unfunded mandates of state governments on

local governments, in order to perform the legally required duties and operate under constraints from states, local governments with more state-imposed constraints would be expected to spend less on developmental policy and more on allocational policy functions. The finding describes a certain aspect of intergovernmental relationship that various constraints such as preemptions, mandates, and categorical grants, as well as earmarked funding from higher levels of governments increase the higher levels of governments' influence over the local governments (Kincaid, 1990).

*Demographic Characteristics (H5a- H5d).* All of demographic variables have statistically significant relationships with city government expenditures. The extent of racial homogeneity [White] is negatively associated with spending in all three policy areas and it has a statistically significant impact on developmental ( $\beta = -.171, p < .10$ ) and allocational spending ( $\beta = -.113, p < .05$ ). The results support *Hypothesis<sub>5a</sub>: Racially homogeneous cities will spend less on allocational policy functions.* Previous research suggests that racially heterogeneous cities tend to have a variety of views and policy preferences on local service levels, which lead to less consensus on local policy decisions (Clingermayer & Feiock, 1995; Keiser et al., 2004; Wong, 1990). The finding here is consistent: racial homogeneity is more likely to be associated with greater agreement on preferred levels of spending for developmental functions as well as for allocational services and programs.

However, the effects of population growth [Pop Growth] on local spending do not support *Hypothesis<sub>5b</sub>: Cities with higher population growth rates will spend more on developmental policy functions* or *Hypothesis<sub>5c</sub>: Cities with higher population growth rates will spend more on developmental and allocational policy functions.* The results indicate that cities

with higher population growth rates spend less rather than more on redistributive policy functions ( $\beta = -.523, p < .01$ ). This finding may be accounted for by the different proportion of local government spending across the three categories. In general, whereas spending on developmental and allocational functions amounts to a large portion of the city budget, the absolute amount of redistributive spending is quite small. In determining resource allocations, a marginal change of redistributive spending seems to be more prominent than in developmental or allocational expenditures. Furthermore, if the population growth rate is explosive, despite the increase of actual expenditures, the per capita expenditures will show that the city budget seems to decrease. Therefore, although the effects of demographic characteristics on local spending do not support the hypotheses in this study, the results are consistent with previous research.

The results in Table 5-8 and Table 5-9 also suggest that cities with larger elderly populations [Elderly] spend more on developmental ( $\beta = .355, p < .01$  in Table 5-8 &  $\beta = .331, p < .05$  in Table 5-9) and allocational policy ( $\beta = .331, p < .10$  in Table 5-9). These do not support *Hypothesis<sub>5d</sub>*: *Cities with larger elderly populations will spend more on redistributive policy functions* and are inconsistent with previous research. However, the positive relationship can be explained in part if increasing elderly populations promote governmental activities like local zoning and land use planning to increase provision of home care, transportation, home finance instruments, and homecare services for the elderly (Pitkin & Myers, 2008). The intensified planning functions are likely to result in more developmental spending, although the outcomes (actual redistributive spending) are probably quite different depending on whether planning and policy reshape markets or remain market-driven.

*The Relative Influence of Each Perspective.* The regression results indicate that various factors play at least a contributing role in determining city government expenditures among policy types. However, interpretations of the individual coefficients in Table 5-8 and 5-9 are limited in what they reveal about the relative influence of each perspective. Table 5-10 shows the relative influence of blocks of variables that represent each perspective by using changes in  $R^2$ s.

Five models were added to compare the  $R^2$ s. As a base model, the first used year-dummies and demographic variables that represent basic city characteristics. The second model included citizens' political ideology along with the base model to explain the city government expenditures. The third model included only city competition and economic resources with year-dummies and demographic variables. Although city competition represents a structural constraint emphasized in the economic determinism perspective, the number of cities within a county does not clearly tap a city's economic affluence. Hence, a model only using economic resources with the variables of the base model appears in parentheses below the third model. The fourth model included only the institutional variables, form of government and state-constraint, with the controls. Lastly, the fifth model has only community QoL (two results depending on QoL indicators), in addition to the base model. The  $R^2$  for each of these models is reported in Table 5-10.

When the political variable is included, explained variation increases by 1.5%, 8.2%, and 14.6% compared to the base model depending on policy types. The Economic determinism factors increase the  $R^2$ s by 87.3% to 104.8% compared to each base model. In the model without city competition, the change in  $R^2$  for allocational spending increases by 36.1%. The institutional factors combined with the control variables increases the  $R^2$  by 56.8%, 31.1%, and 60.5% from

each base model for each policy type. Lastly, the community QoL factor increases the  $R^2$  by 9.7%, 31.9%, and 9.8% respectively.

**Table 5-10.  $R^2$ s for Full and Restricted Regressions by Policy Areas**

Model	D_Exp.	A_Exp.	R_Exp.
Demographics with year dummies (Base Model)	.0936	.1782	.1250
Base with Political factor	.0950	.1928	.1433
Base with Economic Determinism factors (with only Economic resources)	.1753 (.0986)	.2984 (.2426)	.2560 (.1302)
Base with Institutional Structures	.1468	.2337	.2006
Base with community QoL (with proportion of positive QoL evaluations)	.1027 (.1024)	.2351 (.2503)	.1372 (.1412)
Full Model (with proportion of positive QoL evaluations)	.2317 (.2281)	.3652 (.3643)	.3143 (.3160)
<i>N</i>	166	167	167

Note: D\_Exp. = Developmental Expenditures; A\_Exp. = Allocational Expenditures; R\_Exp. = Redistributive Expenditures.

Rather than suggesting a dominant perspective, this comparison underscores that local policy decisions are complex functions of several different factors. In particular, comparison confirms that community QoL appears to be about as critical as other factors. The effect of community QoL allows for additional analysis to examine the threshold effects of QoL on local spending. The following section provides the results and interpretations of such additional analysis.



### 3. Threshold Effects of QoL

I expected that the effect of community QoL on local government expenditures would differ depending on city income levels. To examine the moderating effects of city income level on local spending, the cities in the sample were divided into two subsamples, one for “relative higher income level cities” and the other for “relative lower income level cities”; the distinction between types of cities was whether a city’s per capita income is higher than the PCI of the state in which the city is incorporated. I assume that local policy priorities will adjust to accommodate changing citizen needs and desires. In the dynamics of policy preferences and citizen needs, as an external reference for judging their community’s circumstances, other cities’ situations play a significant role (Dissart & Deller, 2000; Evans, 1994; Liao et al., 2005; Sirgy, 2001). Given the importance of local economic conditions for community QoL, each state’s PCI was used as the external reference. This division allows for examining whether or not local policy priorities to improve community QoL are distinctive depending on their relative income levels.

**Figure 5-1. The Distribution of City Government Expenditures**



To compare the spending composition of higher income level areas with one of lower income level cities, Figure 5-1 plots the distribution of expenditures to each policy function. The figure gives a picture of the way that local governments allocate their local resources to each policy function depending on their relative local income levels. In Figure 5-1, each vertex indicates an assigned budget for the policy function. For each vertex, lines parallel to the opposite side give the spending distribution, where the proportion of being assigned to the spending remains constant. Each point, representing a city, contains three pieces of information: the proportions of developmental, allocational, and redistributive spending to the total local budget.

Roughly speaking, the closer a point appears to one of the vertices, the more local resources are distributed to a certain policy arena. A substantial number of cases in both areas are in the right side of the triangle, which indicates that city governments spend less on redistributive policy functions and more on the allocational policy arena. As city income levels increase, some cases move to the lower right side of the plot in higher income level areas, but the overall spending patterns seem to be similar in the subsample.

**Table 5-11. Government Spending across Policy Types**

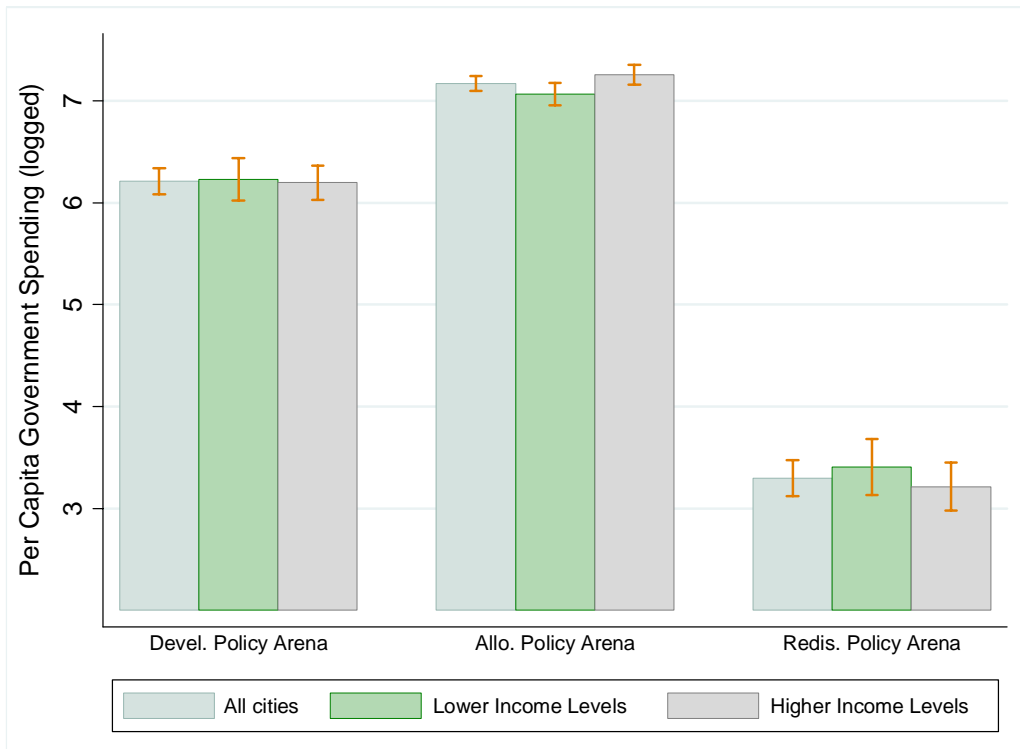
Sample	Devel. Exp.		Allo. Exp.		Redis. Exp.		N
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
All cities	6.212 (32.3%)	0.848	7.175 (65.3%)	0.479	3.298 (2.4%)	1.166	167
Lower income levels	6.231 (31.8%)	0.891	7.069 (65.6%)	0.478	3.408(2.6%)	1.186	73
Higher income levels	6.197(27.0%)	0.818	7.257 (71.1%)	0.466	3.213(2.0%)	1.150	94

Note: Logged per capita spending is reported in the table; the proportion of each spending to the total budget is in parentheses; where rows do not sum to 100%, the discrepancies is accounted for by rounding.

In addition to the plots, Table 5-11 provides a comparison of government spending in the subsamples with the whole sample. The means and standard deviations of government expenditures for the policy areas by the sub-sampling are reported with the proportion of each kind of spending to the total local budget. On average, in lower income areas, 31.8 % of the funds are devoted to developmental functions, 65.6 % to allocational spending, and 2.8 % to redistributive spending. In higher income areas, city governments spend an average of 27%, 71%, and 2% of their budgets on developmental, allocational, and redistributive policy functions, respectively. Allocational policy spending is the largest proportion of local government spending in both areas, followed by developmental and redistributive spending. Compared to all cities, cities with lower income levels spend more on developmental functions and less on allocational policy compared to higher income cities. However, the mean expenditures in both areas do not show substantial differences depending on income levels. .

Figure 5-2 shows a graphic of the government spending along with error bars for the 95% confidence interval, which allows one to see whether the differences between the sub-samples in mean expenditures are statistically significant. Given the overlapped standard error (SE) bars in all three policy areas, Figure 5-2 shows that the subsamples are not statistically different in the three policy areas in terms of governmental expenditures.

**Figure 5-2. Government Spending and City Income Levels by Policy Type**



Note) The error bars show 95% confidence intervals for the mean difference of government expenditures.

Following regression estimations on all cities, two stage least squares (2SLS) for developmental spending and ordinary least squares (OLS) for allocational and redistributive spending were used in this analysis. In reporting the results, robust standard errors were used to reduce the impact of small sample size on the variance of the disturbances around the regression lines (Baum, 2006; Wooldridge, 2008). The Tables 5-12 through 5-15 provide the results of regressing governmental expenditures for the sub-policy areas on community QoL depending on city income level.

**Table 5-12. Estimates for Government Expenditures with Community QoL Scores: Lower Income Level Cities**

Variables	Developmental Exp. (2SLS)		Allocational Exp. (OLS)		Redistributive Exp. (OLS)	
	Coef.	SE	Coef.	SE	Coef.	SE
Community QoL	0.904**	0.452	0.290	0.262	0.333	0.601
Demo. votes	- 0.001	0.009	0.007	0.005	0.011	0.012
PCI	- 0.033	0.212	0.104	0.132	0.199	0.308
Incorporated cities	- 0.261***	0.067	- 0.107***	0.040	- 0.463***	0.105
Form of Gov	- 0.275	0.179	- 0.053	0.109	- 0.138	0.347
Tax Limit	- 1.186***	0.253	0.276***	0.107	0.094	0.365
White	- 0.283**	0.118	- 0.255***	0.060	- 0.406**	0.174
Elderly	0.657***	0.152	0.238*	0.139	0.093	0.363
Pop. Growth	0.468***	0.131	0.136	0.107	- 0.543*	0.283
dum_02	0.155	0.246	- 0.243	0.170	1.220***	0.461
dum_03	- 0.331	0.276	- 0.285	0.215	0.769	0.549
dum_04	0.126	0.242	0.113	0.196	0.760*	0.413
dum_05	0.226	0.257	0.063	0.150	1.066***	0.361
dum_06	0.105	0.236	- 0.171	0.141	0.602	0.367
dum_07	0.289	0.290	0.105	0.141	0.499	0.363
<i>N</i> =	72		73		73	
<i>F</i> -value	10.14***		5.93***		3.27***	
<i>R</i> <sup>2</sup>	0.591		0.442		0.374	

Note: Unstandardized coefficients and robust standard errors are reported; \**p* < .10, \*\**p* < .05, \*\*\**p* < .01.

**Table 5-13. Estimates for Government Expenditures with Proportion of Positive Community QoL Responses: Lower Income Level Cities**

Variables	Developmental Exp. (2SLS)		Allocational Exp. (OLS)		Redistributive Exp. (OLS)	
	Coef.	SE	Coef.	SE	Coef.	SE
posi_QoL	0.297**	0.147	0.058	0.088	0.058	0.205
Demo. votes	- 0.001	0.009	0.007	0.005	0.011	0.012
PCI	- 0.062	0.212	0.105	0.137	0.203	0.313
Incorporated cities	- 0.260***	0.067	- 0.108***	0.041	- 0.465***	0.106
Form of Gov	- 0.301	0.185	- 0.051	0.110	- 0.133	0.349
Tax Limit	- 1.166***	0.247	0.275**	0.112	0.091	0.370
White	- 0.267**	0.114	- 0.238***	0.059	- 0.383**	0.178
Elderly	0.690***	0.153	0.244*	0.137	0.099	0.363
Pop. Growth	0.474***	0.131	0.136	0.106	- 0.542*	0.281
dum_02	0.108	0.235	- 0.258	0.170	1.203***	0.460
dum_03	- 0.395	0.261	- 0.305	0.215	0.747	0.555
dum_04	0.127	0.246	0.113	0.206	0.760*	0.423
dum_05	0.226	0.253	0.059	0.149	1.061***	0.365
dum_06	0.088	0.228	- 0.169	0.142	0.606	0.370
dum_07	0.286	0.283	0.091	0.142	0.479	0.364
<i>N</i> =	72		73		73	
<i>F</i> -value	10.50***		5.35***		3.13***	
<i>R</i> <sup>2</sup>	0.604		0.434		0.372	

Note: Unstandardized coefficients and robust standard errors are reported; \**p* < .10, \*\**p* < .05, \*\*\**p* < .01.

**Table 5-14. Estimates for Government Expenditures with Community QoL Scores: Higher Income Level Cities**

Variables	Developmental Exp. (2SLS)		Allocational Exp. (OLS)		Redistributive Exp. (OLS)	
	Coef.	SE	Coef.	SE	Coef.	SE
Community QoL	- 0.313	0.733	0.481**	0.233	- 1.454***	0.536
Demo. votes	0.008	0.009	0.005	0.004	0.018*	0.011
PCI	0.356	0.367	0.135	0.117	0.706**	0.307
Incorporated cities	- 0.208***	0.080	- 0.09***	0.033	- 0.335***	0.110
Form of Gov	- 0.190	0.348	- 0.266**	0.129	- 0.854**	0.358
Tax Limit	- 0.102	0.519	0.228	0.164	- 0.361	0.294
White	- 0.015	0.124	0.026	0.053	0.085	0.132
Elderly	0.131	0.141	0.030	0.080	- 0.059	0.236
Pop. Growth	- 0.222	0.135	- 0.239***	0.064	- 0.542***	0.183
dum_02	- 0.378	0.430	- 0.390*	0.225	- 0.526	0.454
dum_03	0.145	0.286	- 0.139	0.128	- 0.166	0.434
dum_04	- 0.089	0.352	- 0.193*	0.116	- 0.187	0.325
dum_05	0.409*	0.232	0.062	0.120	- 0.316	0.299
dum_06	0.141	0.258	- 0.142	0.139	- 0.258	0.336
dum_07	- 0.098	0.252	0.075	0.131	- 0.219	0.273
<i>N</i> =	94		94		94	
<i>F</i> -value	2.11**		5.81***		3.66***	
<i>R</i> <sup>2</sup>	0.198		0.470		0.415	

Note: Unstandardized coefficients and robust standard errors are reported; \**p* < .10, \*\**p* < .05, \*\*\**p* < .01.

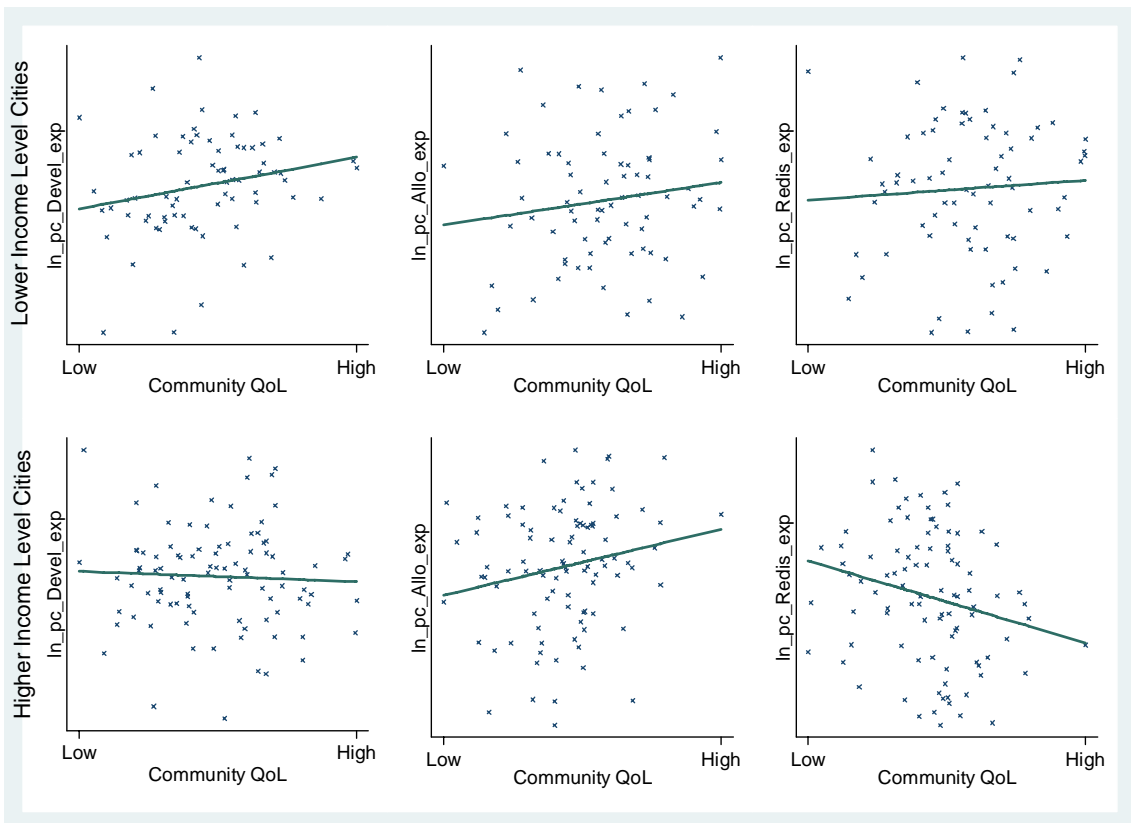
**Table 5-15. Estimates for Government Expenditures with the Proportion of Positive Community QoL Responses: Higher Income Level Cities**

Variables	Developmental Exp. (2SLS)		Allocational Exp. (OLS)		Redistributive Exp. (OLS)	
	Coef.	SE	Coef.	SE	Coef.	SE
posi_QoL	- 0.128	0.204	0.130**	0.065	- 0.385***	0.149
Demo. votes	0.008	0.009	0.005	0.004	0.016	0.010
PCI	0.395	0.346	0.159	0.106	0.622**	0.289
Incorporated cities	- 0.206***	0.076	- 0.097***	0.033	- 0.315***	0.108
Form of Gov	- 0.193	0.337	- 0.247*	0.130	- 0.914***	0.356
Tax Limit	- 0.069	0.520	0.198	0.173	- 0.276	0.305
White	0.001	0.126	0.025	0.052	0.085	0.132
Elderly	0.103	0.156	0.048	0.084	- 0.110	0.240
Pop. Growth	- 0.221*	0.133	- 0.234***	0.063	- 0.560***	0.185
dum_02	- 0.368	0.437	- 0.388*	0.222	- 0.534	0.453
dum_03	0.154	0.285	- 0.136	0.131	- 0.179	0.432
dum_04	- 0.089	0.347	- 0.200*	0.118	- 0.165	0.327
dum_05	0.410*	0.230	0.059	0.119	- 0.306	0.307
dum_06	0.142	0.249	- 0.156	0.139	- 0.214	0.335
dum_07	- 0.097	0.247	0.058	0.131	- 0.166	0.274
<i>N</i> =	94		94		94	
<i>F</i> -value	2.08**		5.87***		3.71***	
<i>R</i> <sup>2</sup>	0.193		0.470		0.413	

Note: Unstandardized coefficients and robust standard errors are reported; \**p* < .10, \*\**p* < .05, \*\*\**p* < .01.

Based on the regression results, Figure 5-3 graphically depicts the relationships between community QoL and local spending on expenditures in the three policy areas. The figure derives from the regression results in Table 5-12 for lower income level cities and Table 5-14 for higher income level cities. The plots graphically show the differential effect of community QoL depending on city income levels.

**Figure 5-3. Partial Regression Plots between Community QoL and City Government Expenditures by Policy Type**



Note: The partial regression plot of the developmental policy arena is based on OLS estimation using the predicted value of the instruments to replace an endogenous variable, community QoL. In both iterations, the sign of the coefficient is the same, and the magnitude of the coefficients and the robust standard errors are very similar. The specific results are presented in the Appendix A.

*Developmental Policy Arena (H1b)*. Figure 5-3 shows that the relationship of community QoL with developmental spending is positive in lower income areas compared to higher income level cities. Figure 5-3 indicates that the relative city income level moderates the relationship between community QoL and city government expenditures on developmental policy.

*Hypothesis<sub>1b</sub>* stated that *in higher income areas, the level of QoL will have less significant impact on developmental spending, while in lower income areas, the QoL levels will have a positive impact*. As the tables show, QoL indicators have a differential effect on developmental expenditures depending on city income level, but the coefficients are only statistically significant in lower income areas ( $\beta = .904$  &  $.297$ ,  $p < .05$ ). The finding suggests that community QoL has a significant impact on determining developmental policies only in lower income cities. The results support *Hypothesis<sub>1b</sub>*. In lower income areas, citizens are concerned with economic benefits, but in higher income cities, economic interests evidently are less influential. In response to citizens' demands, local governments in lower income areas are likely to spend more on developmental policy area in relation to the community QoL.

*Allocational Policy Arena (H1d)*. A moderate effect on allocational spending can be clearly observed in Figure 5-3. City income level moderates the positive relationship between community QoL and allocational spending in such a way that the relationship is stronger when the relative income level is higher than when it is lower. Community QoL then has a differential effect on allocational spending depending on income levels.

*Hypothesis<sub>1d</sub>* suggested that, *in higher income areas, the level of QoL will have a positive impact on allocational spending, while in lower income areas, the QoL levels will have less significant impact*. Yet, as can be seen in Tables 5-12 through Table 5-15, community QoL



indicators have a positive impact on allocational expenditures regardless of income levels, but the relationship between community QoL and allocation spending is statistically significant ( $\beta = .481 \text{ \& } .130, p < .05$ ) only when income levels of cities are higher. These results are consistent with *Hypothesis<sub>1d</sub>*. The presence of the moderating effect of city income levels on allocational spending indicates that the impact of allocational functions on attracting businesses and people may be limited to higher income level cities.

*Redistributive Policy Area (H1f)*. Like developmental spending, Figure 5-3 shows that the relationship of community QoL with redistributive spending is negative in higher income areas compared to lower income level cities. The impact of community QoL on redistributive spending appears to be moderated by income levels.

This study proposed *Hypothesis<sub>1f</sub>*: *In higher income areas, the level of QoL will have a negative impact on redistributive spending, while in lower income areas, the QoL levels will have less significant impact.* The statistical results only support the negative associations between community QoL and redistributive spending ( $\beta = -1.454 \text{ \& } -.385, p < .01$ ) when income levels of cities are higher. The results support *Hypothesis<sub>1f</sub>*, which once more indicates the presence of a moderating effect of city income levels. Local governments spend less on redistributive policies only in higher income level cities.

In sum, based on the threshold effect at the community level, this study expected that local policy priorities adjust to accommodate differing local needs. The moderating role of city income levels is clearly observed in Figure 5-3. Community QoL has differential effects on local government expenditures across the policy areas depending on income levels. Additionally, the

regression results demonstrate that the relationship between community QoL and developmental spending is positive only in lower income level cities, while community QoL has a positive relationship with allocational spending only in higher income cities. In other words, local governments primarily focus on policy that strengthens local economic conditions in lower income level areas, but in higher income cities, developmental policy is limited in accommodating the evolving citizen needs. Local governments are more concerned with allocational policy functions to respond to citizens' demands in higher income level areas. The focus of local policy may be shifted from local economic prosperity to diverse service provision. This finding may reflect the difference in local policy priority to increase governmental responsiveness depending on relative city income levels.

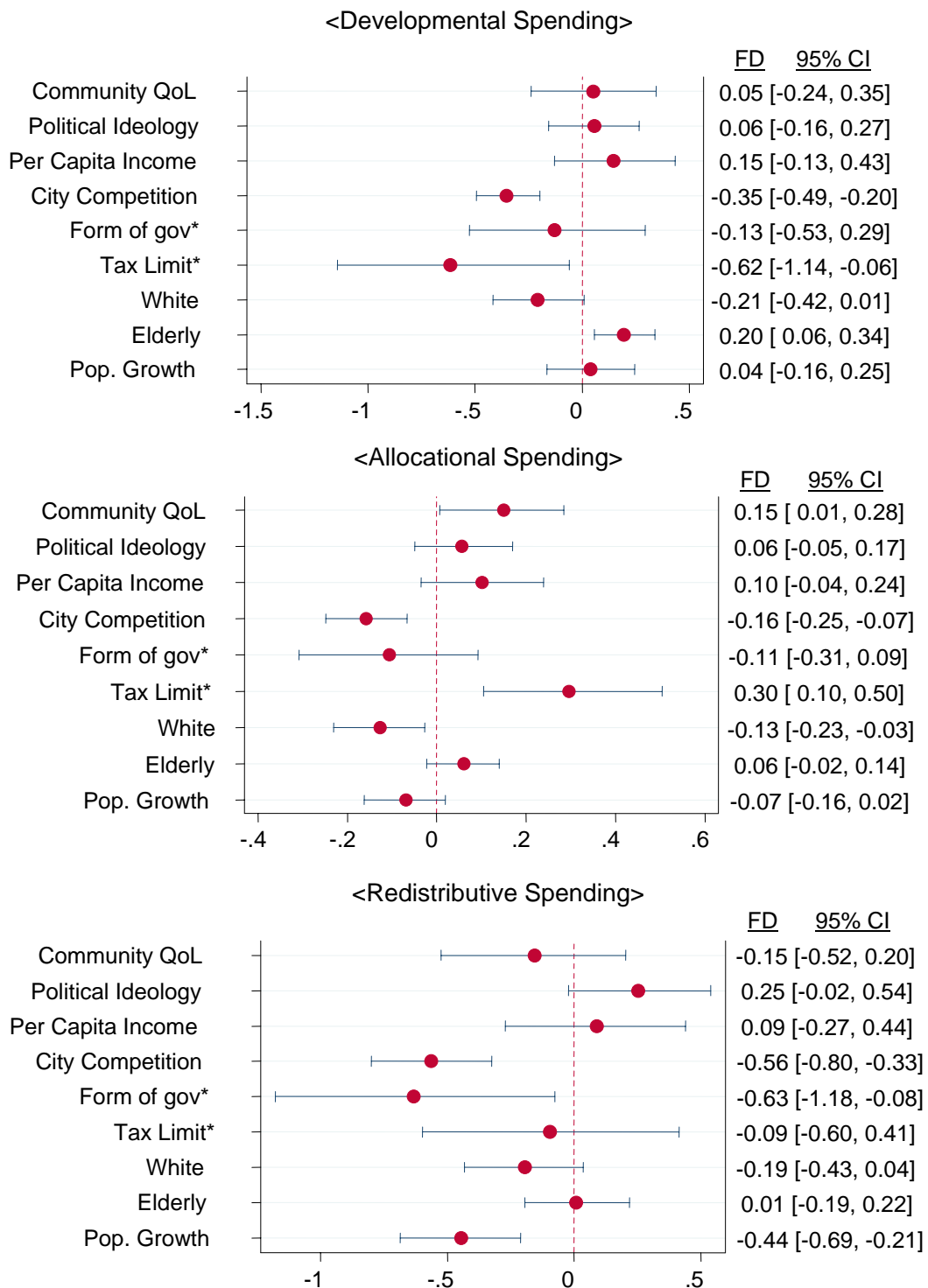
#### ***4. Marginal Effects***

Even if there is a consistently statistically significant relationship between the variables and local government spending in the three policy areas, it is still ambiguous to what extent the effects are substantively significant. Hence, beyond statistical significance, I went to estimate the impact of the independent variables by calculating each variable's marginal effect on city government expenditures in each policy types. To measure the magnitude of the effects, a simulation<sup>40</sup> was conducted to predict government spending when each variable was allowed to vary from its 25th percentile to its 75th percentile, holding all other variables constant at their means or modes. For the discrete variables, Form of government and Tax Limit, the effect was calculated when the variable changes from 0 to 1.

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<sup>40</sup> The study employed methods similar to those described in King, Tomz, & Wittenberg (2000) to determine the marginal effects. The predicted value was first calculated by the simulation utility developed by Tomz, Wittenberg, & King (2003). Then, Boehmke's (2008) data utility was used to plot the estimates.

**Figure 5-4. Marginal Effects on Budget Allocation by Policy Type**



Note: Predicted differences were calculated via simulation using the models in Table 5-8; \* indicates discrete variable; the arms of the box plot represent the 95 percent confidence interval; the FD (first difference) indicates the predicted differences calculated via simulation that moves from 25<sup>th</sup> percentile to 75<sup>th</sup> percentile; the numbers along the right side of the plot provide the changed mean values of logged government spending.

Figure 5-4 contains the results of these calculations based on the general models in Table 5-8.<sup>41</sup> The findings show the substantive impact on expected government spending of a change in any statistically significant variable from its 25th percentile to its 75th percentile. For instance, by increasing the number of neighboring cities from the 25th percentile to the 75th percentile, the mean value of logged government spending for developmental, allocational, and redistributive policy is expected to decrease by -.35, -.16, and -.56, respectively. State property tax limits decrease the expected mean value of developmental policy spending by -.62, whereas such a limit results in an additional .30 of allocational spending. Table 5-16 reports the result of the simulated budget allocations with recovered values for more systematic interpretation.

**Table 5-16. Results of Simulated Budget Allocations by Policy Type**

General Model	Developmental Exp.		Allocational Exp.		Redistributive Exp.	
	Shift in the Gov. Exp.	Change of Exp. (%)	Shift in the Gov. Exp.	Change of Exp. (%)	Shift in the Gov. Exp.	Change of Exp. (%)
Community QoL	670.93	4.77	1310.94	16.56**	49.59	-14.04
	702.93		1528.07		42.63	
Demo. votes	663.18	5.81	1370.36	6.06	39.51	29.51*
	701.71		1453.40		51.17	
PCI	637.03	16.51	1348.69	10.83	43.91	8.97
	742.20		1494.82		47.85	
Incor. cities	828.05	-29.37***	1543.81	-14.55***	62.12	-42.96***
	584.88		1319.14		35.43	
Form of Gov	773.68	-12.88	1560.97	-10.39	82.20	-48.47**
	674.00		1398.75		42.36	
Tax Limit	1210.91	-47.13**	1094.93	33.60**	50.56	-10.50
	640.24		1462.81		45.25	
White	768.45	-18.41*	1522.21	-11.81***	51.25	-18.19*
	626.97		1342.42		41.93	
Elderly	615.52	21.17**	1371.17	6.13	45.43	1.12
	745.85		1455.25		45.94	
Pop. Growth	669.87	3.96	1473.59	-6.62	58.68	-35.87***
	696.41		1376.06		37.63	

Note: Results are based on simulations that move from the 25<sup>th</sup> percentile to the 75<sup>th</sup> percentile; \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

<sup>41</sup> The plot of the marginal effects on developmental spending is based on the OLS estimation using the predicted value of the instruments to replace an endogenous variable, community QoL. Once again, the sign of the coefficient are the same, and the magnitude of the coefficients and the robust standard errors is very similar in both iterations. The specific results can be found in the Appendix A.

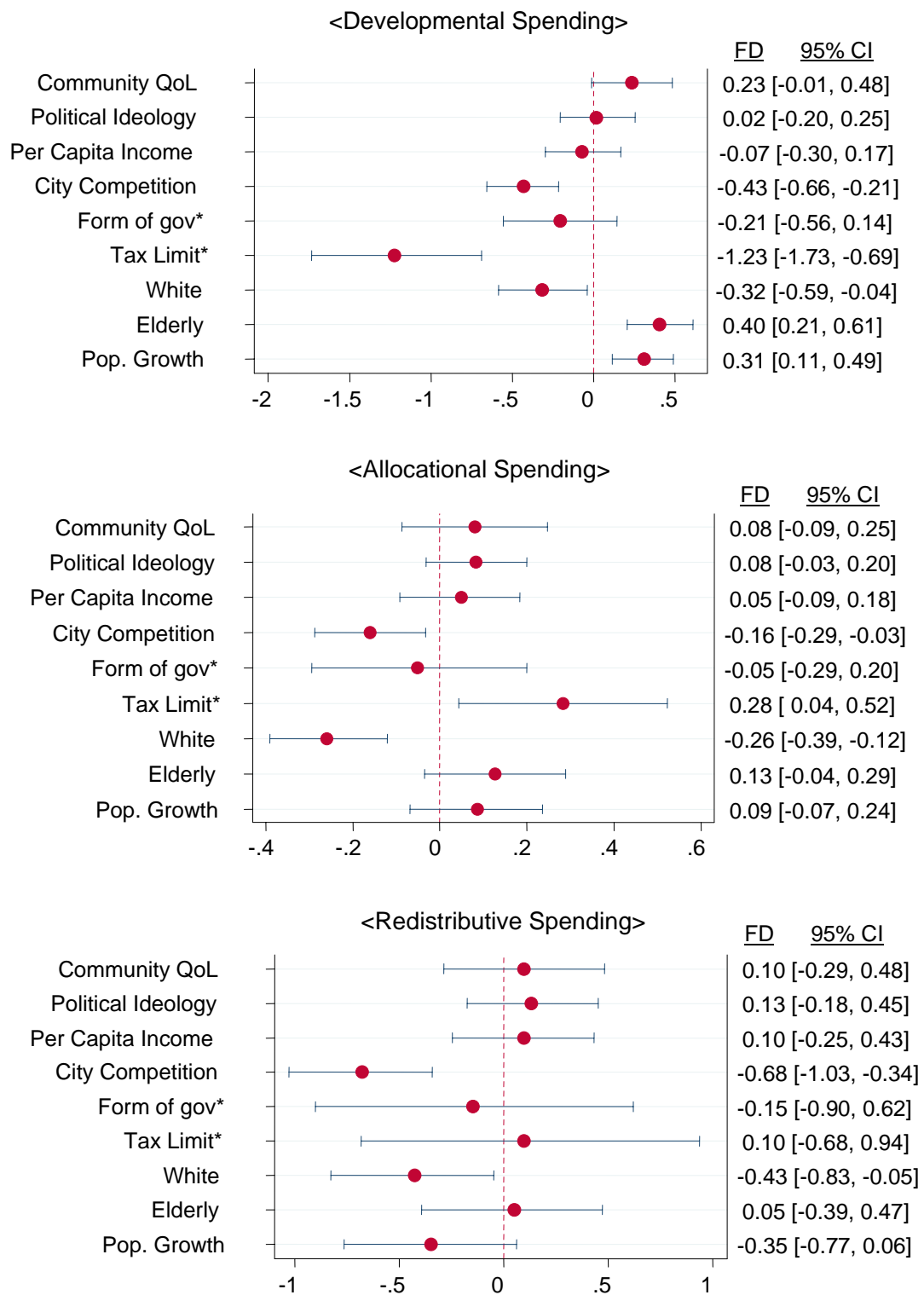
The marginal effects of the independent variables show consistent significances when compared to the regression results. Tax Limit has the strongest effect, decreasing developmental spending by -47.13% (from \$1,210 to \$640,  $p < .05$ ) and increasing allocational expenditures by 33.6% (from \$1,094 to \$1,462,  $p < .05$ ). In redistributive policy areas, another institutional factor, Form of government has the strongest effect, producing a decrease of nearly 50%. Among the variables that have a substantial effect, City competition and racial homogeneity result in decreases in spending in all three policy areas. Like the regression results, community QoL show substantial effects only on allocational policy area, yielding 16.6% (from \$1,094 to \$1,462,  $p < .05$ ) additional government expenditures.

**Table 5-17. Simulated Budget Allocations by Policy Type: Lower Income Cities**

Lower Income Level Cites	Developmental Exp.		Allocational Exp.		Redistributive Exp.	
	Shift in the Gov. Exp.	Change of Exp. (%)	Shift in the Gov. Exp.	Change of Exp. (%)	Shift in the Gov. Exp.	Change of Exp. (%)
Community QoL	573.45 707.50	23.38*	1234.87 1335.34	8.14	52.30 57.67	10.27
Demo. votes	633.70 643.93	1.61	1213.99 1316.52	8.45	50.36 56.90	12.99
PCI	643.66 626.27	-2.70	1251.99 1321.54	5.56	52.49 57.95	10.40
Incor_cities	775.50 507.26	-34.59***	1380.06 1175.13	-14.85**	75.46 37.68	-50.07***
Form of Gov	758.47 617.55	-18.58	1345.29 1269.41	-5.64	64.22 53.49	-16.71
Tax Limit	1868.64 525.68	-71.87***	1013.45 1334.95	31.71**	53.97 55.09	2.08
White	740.62 546.18	-25.25**	1455.45 1126.09	-22.63***	67.25 44.55	-33.75**
Elderly	518.96 771.28	48.62***	1199.97 1362.93	13.58	53.22 56.16	5.52
Pop Growth	509.93 700.29	37.33***	1206.68 1317.53	9.19	69.69 48.87	-29.88*

Note: Results are based on simulations that move from the 25<sup>th</sup> percentile to the 75<sup>th</sup> percentile; \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

**Figure 5-5. Marginal Effects on Budget Allocation by Policy Type: Lower Income Cities**



Note: See notes to Figure 5-4.

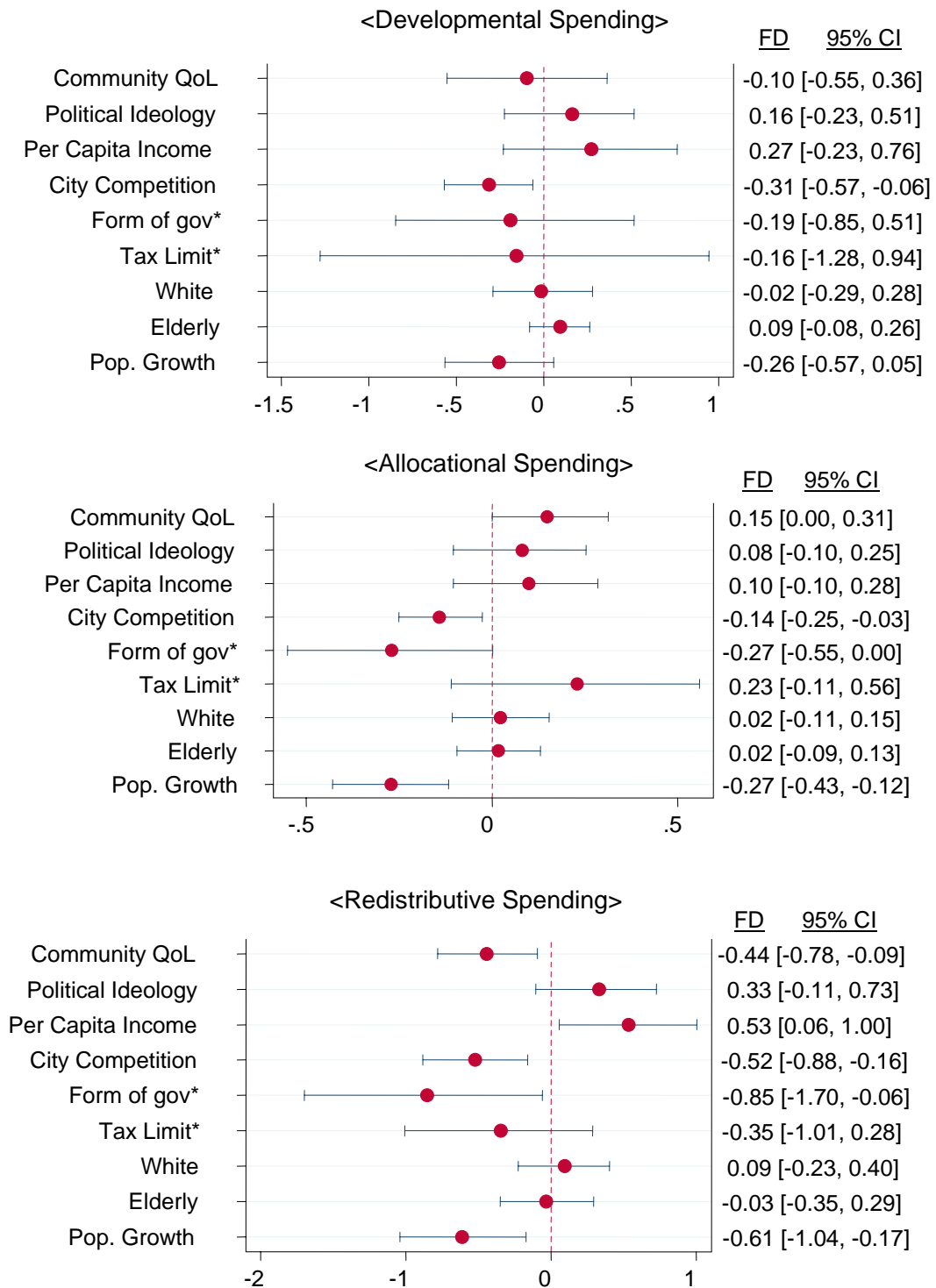
Figure 5-5 and Table 5-17 present the marginal effects in lower income cities. The patterns are similar to those for all cities. City competition and White result in a decrease in government expenditures in all three policy areas. Institutional factors also show strong effects on all policy areas. However, unlike regression results in lower income level cities, the marginal effect of community QoL is also only statistically significant in developmental policy, raising government spending by 24% (from \$573 to \$707,  $p > .10$ ). The effect of the Political ideology on redistributive spending is statistically insignificant, despite creating an additional 13% in spending.

**Table 5-18. Simulated Budget Allocations by Policy Type: Higher Income Cities**

Higher Income Level Cites	Developmental Exp.		Allocational Exp.		Redistributive Exp.	
	Shift in the Gov. Exp.	Change of Exp. (%)	Shift in the Gov. Exp.	Change of Exp. (%)	Shift in the Gov. Exp.	Change of Exp. (%)
Community QoL	720.04 651.34	-9.54	1421.74 1651.39	16.15**	49.26 31.35	-36.36**
Demo. votes	632.53 734.36	16.10	1459.18 1582.67	8.46	33.63 47.23	40.44
PCI	631.42 750.34	18.83	1450.34 1601.22	10.40	30.71 53.07	72.81**
Incor_cities	835.49 605.95	-27.47***	1662.73 1444.90	-13.10***	56.06 32.91	-41.30***
Form of Gov	873.26 667.42	-23.57	1953.09 1482.89	-24.07**	90.57 36.86	-59.301**
Tax Limit	883.80 674.54	-23.68	1239.18 1548.72	24.98	57.56 38.96	-32.31
White	702.72 666.49	-5.16	1500.84 1543.14	2.82	38.02 42.02	10.52
Elderly	645.91 710.99	10.08	1506.18 1533.30	1.80	40.71 39.55	-2.85
Pop Growth	778.93 597.18	-23.33*	1739.62 1323.50	-23.92***	54.21 29.32	-45.91***

Note: Results are based on simulations that move from the 25<sup>th</sup> percentile to the 75<sup>th</sup> percentile;  
\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

**Figure 5-6. Marginal Effects on Budget Allocation by Policy Type: Higher Income Cities**



Note) See notes to Figure 5-4.



In higher income level areas, the pattern of marginal effects on government spending is different when compared to the results of lower income level cities. City Competition still results in a decrease in government spending in all three policy areas, but Figure 5-6 and Table 5-18 show that demographic characteristics including percent white have no substantial effects in higher income cities. Additionally, the pattern of marginal effects of Tax Limit is the same for cities with the lower income levels, but not statistically significant. Community QoL has strong marginal effects, decreasing redistributive spending by -36% (from \$50 to \$31,  $p < .05$ ) and increasing allocational spending by 16% (from \$1,421 to \$1,651,  $p < .05$ ).

In summary, marginal effects of community QoL on government expenditures in the subsampling analysis provide further support to the hypotheses regarding threshold effects:

*Hypothesis<sub>1b</sub>*: A positive impact of QoL on developmental spending in lower income cities,

*Hypothesis<sub>1d</sub>*: A positive impact on allocational spending in higher income cities, and

*Hypothesis<sub>1f</sub>*: A negative impact on redistributive spending in higher income cities.

## **5. General Findings**

Table 5-19 shows the results of the proposed hypotheses to examine the relevance of each factor for the three policy areas within the systematic model of this study. No single theoretical perspective comes close to fully explaining local policy decisions. The results suggest that local decisions about where to allocate limited resources are driven by community QoL, imperatives of political ideology, the constraints of economic resources, the design of governing institutions, and demographics. A resource distributional decision is a function of various factors that can have different effects depending on policy types. The findings broaden the understanding of political actors related to policy decisions.

**Table 5-19. Predicted and Observed Relationship between Spending Determinants and Government Expenditures by Policy Types**

Tested Variable	Developmental Exp.		Allocational Exp.		Redistributive Exp.	
	Prediction	Finding	Prediction	Finding	Prediction	Finding
Community QoL	H1a (+)		H1c (+)	✓**	H1e (-)	
Threshold Effects of QoL	H1b (+)	✓**	H1d (+)	✓**	H1f (+)	✓***
Political Ideology			H2a (+)		H2b (+)	✓**
City Competition	H3a (+)	(-)***		(-)***	H2b (-)	✓***
Economic Resources	H3c (+)		H3d (+)			
Form of Gov.	H4a (+)		H4b (-)		H4c (-)	✓**
State constraints	H4d (-)	✓**		(+)***		
Racial Homogeneity		(-)*	H5a (-)	✓***		
Pop. Growth rate	H5b (+)		H5c (+)			(-)***
Elderly Populations		(+)***		(+)*	H5d (+)	

Note: ✓ indicates hypothesis supported by this study; the direction between variables is in parentheses; parentheses in the column, Finding, indicate an unexpected significant relationship, \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

In general, a variety of political actors such as elected officials, interest groups, and bureaucrats play a role in local policy decisions. The results in Table 5-19 suggest that various political actors may well be pervasive in shaping policy choices. Demographic characteristics (racial homogeneity and proportion of elderly) have a substantial impact on government spending in the three policy areas in Table 5-19. The significant relationships between demographic characteristics and government spending may reflect that public officials consider their community's demographic and socioeconomic characteristics in policy decisions and distributes public goods and services in a relatively effective and fair manner. Scholarship on

bureaucratic theory of urban services distribution helps account for the empirical results. Although service quality exhibits differences, internalized rules or standards that promote administrative efficiency and effectiveness are most important for the distribution of urban services like refuse collection and parks (Mladenka, 1981), public safety (Cingranelli, 1981), and housing inspection (Nivola, 1978). The linkage of demographic characteristics with government spending in all policy functions in this study reflects that public goods and services are controlled and distributed by the administrative procedures. Professional administrators are likely to significantly affect resource-allocation decisions in cities (Cingranelli, 1981; Mladenka, 1980, 1981; Nivola, 1978).

In addition to local bureaucrats, interest groups and political parties also are also likely to play a role in the local policy decision process. Given the significant impact of political ideology on policy decisions, considerable local politics reflects and is shaped by partisan divisions. At the same time, the significant relationship between allocational spending and community QoL indicates that group competition is likely to occur more commonly over the service location, specific service types, or even the level of public services, given that policy choices often align with competing values within limited economic resources. Hence, there are various interest groups in local policy decisions. Since the impacts of each factor on city government spending are distinctive depending on relative city income levels, the influences of political actors are also likely to change with city income level. In short, local policy decisions are made by various political actors that have differential effects depending on local circumstances.

## Chapter 6 - Discussion

This chapter examines the theoretical and practical implications of QoL. The purpose of this study was to examine the impact of QoL, as well as other key factors, on local policy decisions. It found that community QoL has a differential effect on local policy decisions in three policy arenas depending on relative city income levels. These findings suggest that local policy priorities adjusted in accordance with economic growth. Based on these findings, I discuss possible conceptual shortcomings in the treatment of community well-being in *City Limits*. I argue that allocational policy functions also should be thought to be functions of cities geared toward giving them a competitive edge over other cities by meeting evolved citizen preferences for city amenities. The second section examines the implication of QoL for local politics. Peterson's apolitical argument is reconsidered, and then I suggest revised patterns of political activities for each type of policy. Lastly, given that community QoL reflects adjusted citizens' demands, I contend that community QoL can contribute to performance management by providing additional public information and a complementary performance indicator.

### A. Differential Effects of Community QoL

Peterson's (1981) policy scheme assumes that local governments favor developmental policies. Because citizens are primarily motivated by economic interests and their preference for greater economic benefits is consistent, developmental policies are most effective in enhancing governmental responsiveness and competitive advantages in competition among cities. Unless local governments act in ways that are consistent with citizen preferences for greater economic benefits, mobile citizens and businesses will migrate to other localities that can offer greater

economic benefits. From this standpoint, “what governments do to enhance the economic well-being of their communities has become much more critical” (Peterson, 1981, p.106) in achieving responsive governments and competitive advantages. Peterson argues that local governments keep pursuing developmental policies to secure a competitive advantage over other localities, even after achieving the material well-being of the community.

However, the findings here on community QoL contradict Peterson’s policy priorities. The findings highlight two conceptual shortcomings of community well-being in *City Limits*, which in turn point to the importance of allocational policy functions such as city amenities for enhancing governmental responsiveness and city competitiveness.

### ***1. Adjusted Policy Priorities***

Unlike Peterson’s argument, I argue that citizen preferences for greater economic benefits are not fixed. After the city has reached a certain income level, called the “threshold point” (Eckersley, 2000a, 2000b; Max-Neef, 1995), the positive impact of an increase of economic benefits on QoL becomes less decisive. Beyond the threshold point, other citizen preferences that enhance their QoL are more prominent. Consistent with the threshold effect, this study found that community QoL has a differential effect on local policy decisions in the three policy arenas depending on relative city income levels. In relatively lower income level cities, citizens appear to be primarily concerned with economic improvements such as creating jobs and building infrastructures projects, while citizens are more interested in allocational services such as city amenities where the material well-being of the community is achieved. As local governments respond to the evolved citizens’ demands, distinctive citizen preferences, depending on relative income levels, result in different patterns of government spending.

In other words, after achieving economic prosperity, there is a rise of distinctive concerns about and tastes for city amenities including clean air/water, attractive views, and arts that contrast with economic concerns such as jobs or tax breaks. Local economic development increasingly turns on citizens' demands and tastes for various allocational services. To respond to such adjusted citizens' demands, local governments alter their policy priorities. As local economic conditions improve, local governments spend less on developmental policies and more on allocational policies to accommodate citizens' demands.

**Figure 6-1. Government Spending and Community QoL by Policy Areas and Income**

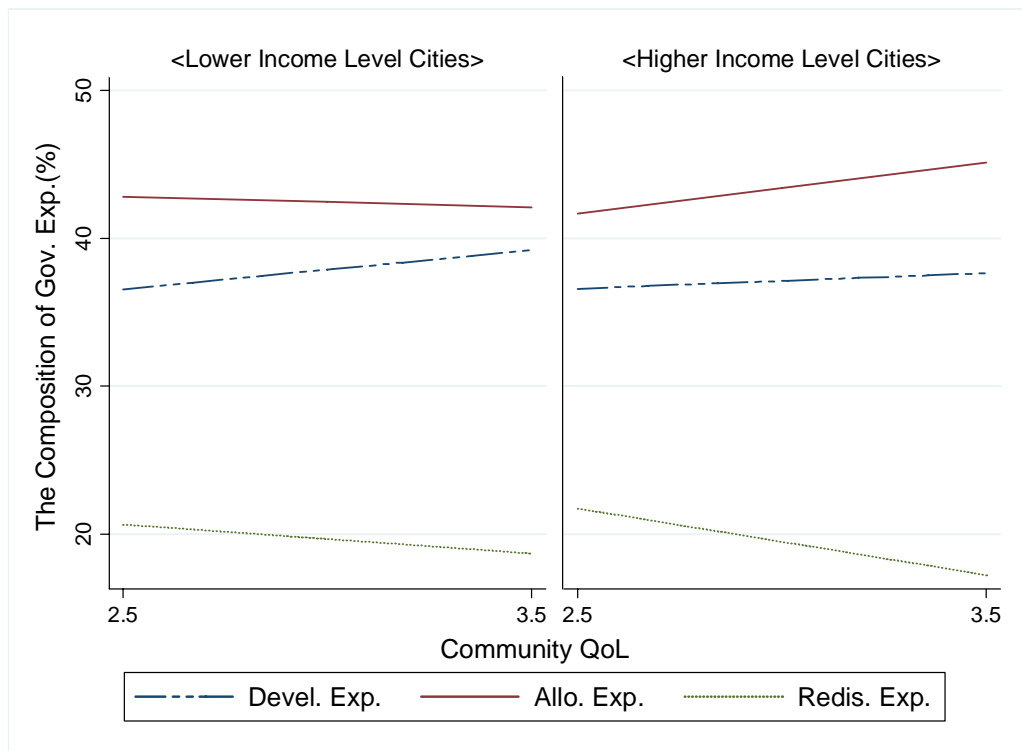


Figure 6-1 displays the changes in the composition of government spending with changes in community QoL for differing policy areas and relative city income levels. In lower income, the proportion of developmental spending increases in QoL. Allocational spending as well as redistributive spending is relatively steady across QoL levels. However, in higher income cities,

the proportions of allocational and redistributive spending rise more steeply as community QoL increases, while developmental spending appears to be static.

The figure highlights a limitation of Peterson's assumption about policy priorities. Local governments tend to spend more on a particular policy arena to meet citizen preferences, as Peterson (1981) argues. However, local policy priorities for economic growth are counterbalanced by distinctive citizens' concerns and tastes for city amenities, after the material well-being of the community is achieved. This finding suggests that citizens are concerned with allocational services including city amenities along with economic interests. The relative influences of the interests adjust in accordance with local economic levels. Local governments evidently are concerned primarily with evolved citizens' demands in weighing community issues and choosing policy alternatives.

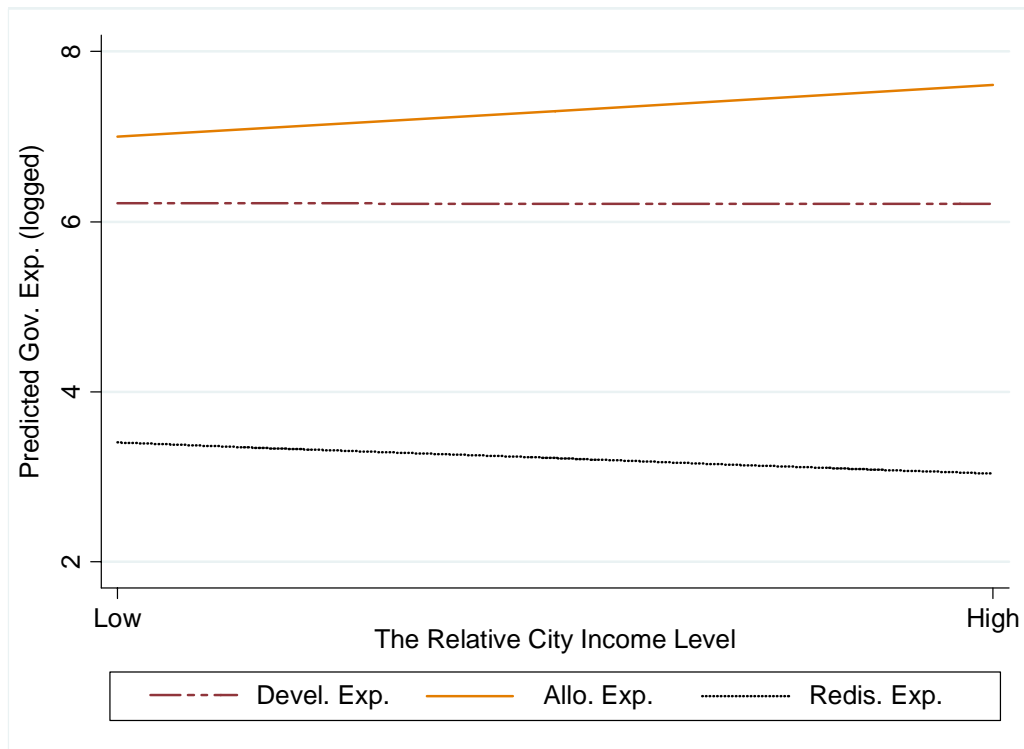
It is also important to point out, however, that the evidence presented here should not be interpreted to mean that developmental policies in higher income level areas do not matter in local policy decisions. Citizens continually reinterpret life circumstances (Henig, 1992) and compare local conditions with other cities (Peterson, 1981; Sirgy, 2001). The interpretation and comparisons lead citizens to adjust their demands by considering policy outcomes in their localities and comparing the community circumstances of their city with other cities. The criterion used to judge local economic conditions affecting citizens' preferences and demands is adjusted along with the changes in the city and other places' circumstances.<sup>42</sup> Because of the

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<sup>42</sup> QoL scholars extend Maslow's (1970) theory of a hierarchy of needs to argue that subjective assessment of life is based on objective living conditions as universal human needs. In the hierarchy of needs, lower level needs such as universal human needs such as food, water, and physical safety must be met before individuals can fulfill higher psychological needs that lead to self-actualization. Lower level needs are not jettisoned even after an individual has moved upward to higher needs. Given external criterion assumed to be used to evaluate local circumstances (other places' current situation), satisfaction with local economic conditions is not secure.

relative references for community circumstances, satisfaction with economic conditions is not stable. Economic issues remain essential even in higher income level cities.

**Figure 6-2. Local Government Spending and Relative City Income Level by Policy Area**



Note: The predicted government expenditures are estimated from the fully specified models, regression results in Table 5-8.

Figure 6-2 displays the association between community QoL and predicted government expenditures in each of the three policy areas. Unlike allocational spending, developmental spending is steady irrespective of relative city income levels. The results show that local governments maintain their developmental spending at a certain level. Although local governments in higher income areas do not focus on policies that strengthen traditional economic factors such as land, infrastructures, and finance, they are still concerned with basic factors of



economic development in order to maintain their economic prosperity. Local government officials pay attention to the importance of local economic conditions in a city.

In short, city amenities and aesthetic issues are not full substitutes for policies responding to the economic interests of citizens, even when policy priorities for city growth shift toward provision of abundant city amenities. Given the differential effects of QoL on government spending, which varies by relative income levels, and steady developmental spending, the key message is that local governments do not put too much importance on traditional basic economic conditions and ignore the importance of city amenities. Especially where the material well-being of the city has been achieved, local governments are more concerned with citizens' demands for city amenities and economic conditions, the relative influences of which adjust with circumstances. Broader citizen participation in city zoning or planning may be more effective for local governments in enabling them to better reflect the complicated and changing citizens' demands and to help balance the functions of economic development and city amenities.

## ***2. Citizens' Non-Economic Concerns***

This study found that local policy priorities evidently adjust to respond to citizens' demands, which include both economic interests and non-economic concerns such as city amenities. This suggests two conceptual shortcomings regarding desirable community circumstances that are apparent in *City Limits*.

First, Peterson (1981) does not recognize the importance of the subjective dimension of QoL in policy decisions. QoL depends on various objective conditions surrounding the person and the individual's subjective perceptions of those conditions. Focusing on local economic conditions, largely represented by numbers such as income levels or employment rates, is limited

in its capacity to accurately reflect people's experiences, perceptions, attitudes, and values combined with local circumstances. Citizen preferences for public policies (Page & Shapiro, 1983) and for governments spending (Jacoby, 1994) are adjusted along with changes in objective conditions. For instance, when growing local economies start to suffer from the negative impacts of growth by deteriorating local circumstances such as traffic jams, environmental pollution, increased cost of living, or higher density, people in the communities are subject to greater stress (Baldassare & Wilson, 1995). If the negative effects of developmental policies are greater than the benefits in terms of QoL, citizens may be encouraged to migrate to other cities (Williams & Jobs, 1990). It is necessary to appreciate that both objective and perceived conditions of the community are important markers of community well-being.

Second, in *City Limits*, Peterson equates the "well-being" of cities with their levels of economic growth. Economic affluence is better able to meet citizen needs for safety and health, which result in higher QoL. However, QoL is a holistic perspective. In addition to economic prosperity, community QoL is affected by, for example, diverse local facilities for children, city amenities for leisure activities, close-knit neighborhoods and public safety in residential areas. The various domains that influence the level of community QoL challenge Peterson's (1981) assumption that an enhanced local economy will automatically contribute to community QoL. Economic benefits are one of various citizen needs that are adjusted in accordance with changes in local circumstances. Given that citizens are motivated less by economic interests in higher income cities,<sup>43</sup> local economic prosperity is necessary, but insufficient to achieve community well-being.

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<sup>43</sup> The scatter plot of community QoL by relative city income levels appears in Appendix B. The figure supports the notion that as economic conditions are improved, citizens are motivated less by economic concerns.

The alternative argument about community well-being is consistent with recent research on city growth. Many studies in economic geography challenge the traditional view that local economic development is the driving force for attracting human capital and firms in inter-city competition. This body of research has emphasized the locational choices of individuals principally in response to features of the urban environment and city amenities.<sup>44</sup> For instance, Florida's (2002) 'creative class' theory, the research of Glaeser and his colleagues on consumer cities (Glaeser & Gottlieb, 2006; Glaeser et al., 2000), and the entertainment machine perspective (Clark et al., 2002) broaden understanding of locational decisions and associated spatial patterns of population movements.

These studies argue that spatial patterns of population movements are directly related to the preferences of many individuals focusing on city amenities. An increased proportion of people are involved in providing services based on information and knowledge in a post-industrial era (Florida, 2002). The affluent people, particularly those who are younger, consider a city not only as a clear destination for work but also as a desirable place to live and play. To increase the opportunities for recreation and entertainment that is essential for their lifestyles, they selectively choose a city that has relevant amenities such as clean air, attractive views, parks, museums, art galleries, orchestras, and signature buildings (Clark et al., 2002). This growing concern for city amenities highlights that the shifted policy priorities from pure economic growth to provision of abundant city amenities not only fulfill some citizen needs and desires in a community, but also play a role in attracting and retaining affluent human capital.

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<sup>44</sup> The concept of amenities comes from economics. Gyourko & Tracy (1991) note: "A pure amenity is a non-produced public good such as weather quality that has no explicit price. In practice, previous empirical studies include some government services such as education and public safety" (p. 775).

Community well-being, then, includes various city amenities as well as economic interests. People differ over which community domains are essential for their QoL, and individuals' perception of what matters for their QoL can change (Plagnol & Scott, 2010). When necessary QoL conditions like economic affluence are fulfilled, people attempt to optimize their living environment to improve their well-being, which results in distinctive spatial patterns of population movements related to non-economic factors such as city amenities (Clark et al., 2002; Florida, 2002; Glaeser & Gottlieb, 2006; Storper & Scott, 2009). The availability of 'exit' locally rather than nationally contributes to the explanatory power of QoL for city growth and urban competitiveness. Hence, in terms of QoL, allocational policies such as city amenities are viewed as to be functions of cities geared toward both responsive governance and the maintenance of a competitive edge over other cities, after a city achieves a certain level of economic development.

### **B. Peterson's Apolitical Argument Revisited**

Peterson (1981) argues that local policy decisions are constrained by a unitary interest in economic growth in an open system where local governments cannot control inter-city migration. The unitary interest leads local public policies to be treated differently depending on their impact on the local economy, thus the distinctions among developmental, allocational, and redistributive policy types. Local governments in this view favor developmental policies over other policy types in policy decisions to enhance local tax bases and attract and retain residents and firms. The argument about local policy priorities for economic development is based on the assumption that citizens are primarily motivated by economic interests and their preference for greater economic benefits is stable. Because economic development policies most contribute to community QoL and gain public support, there is little room for political factors in local policy

decisions. In other words, the dominance of economic benefits in a city leads local governments and citizens to pursue developmental policies and avoid redistributive policies. Under these circumstances, political conflicts and competing preferences are theoretically unimportant in local policy decisions. The unitary interests in economic growth tend to define features of local politics such as party competition and group pressures. Political factors are secondary considerations that are less influential on local policy choices.

However, this study found that consensus on developmental policies is not fixed in local policy decisions. The findings on the significance of political ideology and community QoL on local policy decisions indicate that political factors influence policy choices. In Peterson's policy scheme, each type of policy has distinctive patterns of group formation and citizen participation, which define the local politics of developmental, allocational, and redistributive policies. Hence, the following section discusses the importance of local politics in each policy arena by incorporating community QoL into Peterson's scheme of policy and local politics.

### ***1. Politics of the Redistributive Policy Arena***

Peterson (1981) argues that because of their detrimental economic impact, demands for redistributive policy and its proponents are unlikely to gain political support. He characterizes the politics of redistributive policies as a "non-issue," where interest groups and public support are largely absent. Given their concerns for the economic well-being of the city, political leaders are also usually against redistributive policy. Even when redistributive issues emerge in the community, local governments are able to manage the conflict. For instance, it is possible to employ delay tactics to dissipate public attention, to convert redistributive issues into allocational

policy ones, and to convert an economic issue into political ones by shifting the local political structure (e.g., decentralization of certain authorities) (Peterson, 1981).

With regard to the redistributive policy arena, many studies have found that political factors play a role in influencing spending levels. For instance, local political ideology affects redistributive policies more than other policy areas (Choi et al., 2010; Hajnal & Trounstein, 2010; Percival et al., 2009; Wong, 1990). These studies suggest that the local political environments have an impact on policy outcomes, when local governments decide to implement controversial programs such as welfare, aid for the homelessness, and health care for poor and moderate income groups (Percival et al., 2009). This study's findings are consistent with previous research. The significant impact of political ideology on redistributive spending has the potential to draw considerable local politics generated and reflected by partisan divisions into local policy decisions.

## ***2. Politics of the Allocational Policy Arena***

For Peterson, it is only in allocational policies that interest group politics occurs. The allocational policy arena is susceptible to locational competition for public services, programs, local resources, and facilities. The proposal of each interest group is more or less equally persuasive in the interest of the city as a whole, but the policies disproportionately benefit citizens by service location. Organized interests can visibly affect policy outputs in this arena. To the extent that certain kinds of allocational services or local resources are disaggregated, the political conflicts are resolved through bargaining and compromise. Peterson's (1981) policy scheme confines local politics to the allocational policy arena without great consequence for local policy decisions. He argues that in the allocational policy arena, "political bargaining

affects policies, and then the pattern of bargaining takes a characteristically pluralistic form” (Peterson, 1981, p.150). Because of the unitary interest in economic benefits, the politics of the allocational policy arena involve narrower issues. In short, allocational policies are inherently political without great consequence.

However, I contend that given the significant relationship between community QoL and allocational spending, local politics in this policy arena occupies a substantial place in policy decisions. Allocational functions include a wide array of needs and wants based on various city amenities such as public safety, parks and recreation services, conservation of natural environments, sanitation, and emergency management, as well as necessary housekeeping services. When various citizen preferences exist, local policy choices often align with competing purposes. The presence of more than one general purpose makes it harder to narrow policy choices to the one “best” alternative to achieve the community’s general well-being or competitive advantage. Despite the efforts of local governments to respond to varying citizens’ demands, a variety of views on local policy priorities produces competition in local policy decisions. Different interest groups and organized interests are likely to challenge policy decisions to achieve their preferred local policies because of limited local resources. As more diverse citizen preferences are prominent and competing purposes exist, various political groups, through the linkage of policy choices and citizens’ demands, are more likely to be channeled into the local budgetary process. The wide range of distinctive citizens’ demands leads local policy decisions to be reached through political bargaining and compromise. Contrary to the notion of “groupless politics” (Peterson, 1981, p. 116), local politics in the allocational policy arena is likely to influence spending to better reflect diverse citizen preferences.

### ***3. Politics of the Developmental Policy Arena***

According to *City Limits* (1981), developmental policies are formulated and implemented in a highly consensual fashion by community leaders, who usually are businesspeople familiar with the problem of fostering economic growth. Because the benefits of developmental policy are widely distributed, such policies usually have broad and continuous local support. There is no contentious group conflict in the developmental policy arena.

In response to the *City Limits* perspective, many studies such as Stone (1989) and Logan & Molotch (1987) have challenged this evidently apolitical argument about the politics of economic development policy. Regime theory and the growth machine perspective argue that local politics matter, and they challenge that the economic environment in which local governments operate automatically determines policy choices. Both approaches put the local politics back into the local developmental policy decisions.

Stone (1989) emphasizes political coalitions in promoting economic change. No single group monopolizes community assets. Public actors also do not have enough resources<sup>45</sup> to make decisions and to achieve desired policy outcomes in all policy functions through bureaucratic means alone. As a result, elected officials rely on private-sector resources to carry out action, which results in governing coalitions of political, business community, and civil society. A governing urban regime is constructed through informal bargaining and joint work between public actors and business communities. Regime theory emphasizes informal arrangements by which public bodies and private interests function together to achieve certain policy goals related to local economic growth.

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<sup>45</sup> Such resources include money, personnel, land and building, and information (Stone, 1989).



The growth machine perspective (Logan & Molotch, 1987) also emphasizes the importance of business communities in local policy decisions. Logan and Molotch (1987) argue that growth strategies are promulgated by local business communities, especially those in property investing, development, and real estate financing. Property owners strive to maximize the rental value of their land and/or buildings by intensifying their uses. In attempting to attract more mobile investments to promote growth in the locality, property owners form alliances with other business interests. The allies include other groups such as investors of metropolitan capital, elected officials, local media, and quasi-public agencies, because most local players in the growth machine profit from the intensification of land use. In particular, this perspective sees local governments as natural allies of the growth machine, given their growth-oriented tendency within structural constraints. The literature on urban political economy suggests that businesspeople and local bureaucrats are the most influential political actors, since the tendency of local governments for economic growth allows policy decisions to be more aligned with those of businesspeople who tend to favor greater developmental spending (Peterson, 1981; Stone, 1989; Logan & Molotch, 1987).

Likewise, given the significant relationship between community QoL and developmental spending found in this study,<sup>46</sup> businesspeople have a substantial role in local policy decisions especially in lower income level areas. In addition, demographic characteristics (e.g. degree of racial homogeneity, proportion of elderly) have a substantial impact on government spending across all policy areas, but only in lower income level cities. The statically significant relationship between demographic characteristics and government spending may indicate that

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<sup>46</sup> Community QoL driving local policy decisions had differential effects depending on the relative city income level. The relationship between community QoL and developmental spending is positive in relatively lower income level cities, while in higher income cities, community QoL has a positive impact on allocational spending. Refer to regression results in Chapter 5, in Table 5-12 through Table 5-15.

public officials consider demographic and socioeconomic characteristics in policy decisions and distribute public goods and services in a relatively efficient and fair manner (Cingranelli, 1981; Mladenka, 1980, 1981; Nivola, 1978). Professional administrators who rely on technical-rational criteria are substantially involved in local distributional decisions. The findings here support other research on the preponderance of local businesspeople and bureaucrats who are deeply involved in local developmental policy decisions.

However, the decisive role of businesspeople and bureaucrats in the developmental policy arena appears restricted to higher income level cities. This study found no significant impact of either demographic factors on local policy decisions or community QoL on developmental spending in relatively higher income level cities. As relative city income rises, citizens' preferences for city amenities lead any agreed-upon purpose to contend with a wide array of citizen needs and desires. The economic interests of the city are counterbalanced by various citizens' demands for allocational services in higher income areas. For instance, city government is likely to encounter increasing opposition from environmental groups or civic organizations that challenge its developmental policies. Such contention may play down the significance of economic issues and of coalitions between businesspeople and bureaucrats.

At the same time, as local economic conditions improve over time, the local benefits of the developmental policies decrease and their cost increases. As benefits weaken in relation to cost, the local consensus on developmental policy also weakens, thereby changing the basis for politics in the developmental policy arena (Schneider, 1989). As the consensus on economic developmental policy unravels and public support declines, a place opens for contentious group conflict in the developmental policy arena. The growing importance of allocational policy among citizens makes policy preferences for the developmental policy arena less consensual.

Businesspeople and bureaucrats become less influential. In this situation, implementing developmental policies also yields fewer electoral benefits for the city's political leaders. Instead, various interest groups and political parties are likely to be more prominent in the developmental policy decision process in relatively higher income level cities. Non-economic political factors generate a wider range of policy alternatives.

The emergence of political actors and politics in the developmental policy arena can be understood by the dynamics of distinctive citizens' demands and policy choices that is conditioned by the relative city income levels. As in the pluralism perspective, the influence of political actors seldom remains unchanged in local politics, as some community interests are addressed and citizen needs adjust according to changes in local circumstances such as extant of economic growth. In short, as a new environment for urban governance, local economic progress is likely to change the political environment and enlarge the scope of local politics. Especially in relatively higher income level cities, the politics of developmental politics will be less consensual and more contentious.

### **C. Performance Management**

Performance management has generated substantial momentum as part of the new public management (NPM) movement. In the United States, the Clinton administration launched the National Performance Review (NPR) and following this action, the U.S. Congress passed the Government Performance and Results Act (GPRA) of 1993 with a promise to measure progress and hold federal agencies accountable for their results. The George W. Bush administration implemented the Performance Assessment Rating Tool (PART) in 2002 as a framework for agency program assessment and administration budget decisions. The performance movement

has been widespread in the U.S. public sector and in other Anglo-American countries such as Britain, Canada, and Australia. Results-model management centers on the use of performance measures to improve governance (Dull, 2009; Moynihan, 2008; Wichowsky & Moynihan, 2008). Evidence-based performance management emphasizes the use of scientific methods and rigorously established empirical evidence (Heinrich, 2007). These contemporary performance movements seek to enable public officials to routinely assess the actual performance of their organizations.

Local governments also increasingly have attempted to clarify desired outcomes of public programs and to track progress toward their attainment, which emphasizes performance measurement. The extant literature provides evidence of the use of performance information in local policy decisions. Poister & Streib (1999) report that two-thirds of city managers and assistant managers believe that performance measures are an important tool for budgeting purposes. In a survey of budget officers and department heads of 277 city and county governments, Melkers & Willoughby (2005) found that almost half of the respondents (47.8 %) noted that all departments within their governments use performance measures, and another 20 percent noted that at least half of their departments do so.

Despite the increasing use and value of performance information in budget decisions, several scholars report challenges in both fostering the use of performance information and determining reliable performance measures (Bohte & Meier, 2000; Moynihan, 2008; Sterck & Scheers, 2006; Yang & Holzer, 2006). For instance, Sterck and Scheers (2006) describe how policy objectives are overly abstract and vague and generally do not establish causal relationships between inputs, outputs, and outcomes. In this situation, the authors emphasize the importance of internal management to achieve the intended results of performance management.

This section contends that community QoL can be taken into account as a useful framework for addressing some issues in performance management, fostering the use of extant performance information, and facilitating the possibility for better management and government policy decisions.

### ***1. Complementary Indicator***

Community QoL complements extant performance indicators as a measure of the outcomes of governmental actions and citizens' experiences of the policy-making process. Most public performance indicators are based on results that highlight agency or program level performance such as the cost of the service and citizen satisfaction with a certain service. Few indicators measure public performance to ascertain local needs at the jurisdiction level (Yang & Holzer, 2006). It is hard to understand the impact of the wide range of government activities on citizens' lives at the community level. Community QoL can resolve the incongruence between extant performance indicators and a wide range of government activity. Community QoL is a broad measure that relates to the city as a whole rather than to specific agencies, services, or programs. Community QoL in the population at large can serve as one of the important pieces of information on public performance at the city level, which includes most dimensions of public performance in a city such as its economic, social, and cultural conditions. A focus on a holistic measure of public performance like community QoL can lead local governments to pay more attention to the consequences of governmental action upon society. In other words, community QoL represents a broad and multidimensional framework for measuring city-level performance.

Additionally, most public performance indicators focusing on outputs/outcomes/results are limited in fully covering administrative processes that have an impact on public trust (Van

Ryzin, forthcoming) and citizens' evaluations of public performance (Shingler et al., 2008). Administrative processes in general represent a variety of aspects of governance such as fairness, equity, responsiveness, and honesty (Van Ryzin, forthcoming; Shingler et al., 2008). Given that the subjective dimension of QoL is based on evaluation of tangible conditions such as per capita income, air and water quality, and crime rate (Phillips, 2006; Sirgy, 2001) and intangible values such as social equity, freedom, morality, and ethics (Falkenberg, 1998; Liao et al., 2005; Zagonari, 2011), community QoL supplements outcome-based performance indicators. Additionally, this study shows that subjective community QoL is endogenously associated with local policy decisions, which indicates the existence of a feedback loop between them. Community QoL reflects not only outcomes of governmental actions, but also citizens' experiences of the policy-making process. It provides local administrators with the additional information that citizens in a city with high levels of community QoL are likely to enjoy more equitable processes and superior outcomes of governmental actions.

## ***2. Fostering the Use of Extant Performance Information***

This study found that citizens are concerned with allocational services including city amenities, along with economic interests. Citizens' demands evidently change depending on their city's relative income levels. Given complicated and dynamic citizens' demands, community QoL, defined as *citizens' overall perception of the correspondence between current and ideal community circumstances related to citizens' lives*, provides additional performance information. Combining or comparing community QoL with extant performance indicators gives more complete and accurate information about the performance of agencies and programs as well as local governance. Performance information can be a means for developing better links

between public management and policy decisions to implement more effective public policies (Coggburn & Schneider, 2003; Sterck & Scheers, 2006). The increasing use of performance information increases the possibility of success of performance management systems (Moynihan & Pandey, 2010).

Citizens weigh differently a city's economic, social, and cultural conditions that are related to their lives depending on local economic conditions. High-priority values of local governance should change in response to citizens' changing needs. If local governments rely only on objective data on public performance measurements, it will challenge the usefulness of performance measurement and its application to policy decisions. Subjective data also provide valuable information for evaluating public performance, because they reflect sometimes changing citizens' desires and demands. In general, the more comprehensive and accurate a local government's understanding of the policy consequences for citizens' lives, the better the government can make decisions about allocating local resources and setting policy priorities. Others have advocated using citizen satisfaction with local services to better understand the impact of a particular public service and the experience of citizens with the service (e.g., Shingler et al., 2008). Community QoL adds a comprehensive view of policy outcomes for citizens' lives to accurate information on various government activities. This will enhance governmental accountability and the effectiveness of performance measurements.

Additionally, comparison of community QoL with other objective or subjective performance indicators will enable local officials to ascertain changing local needs and to identify high-priority values. Such comparison makes it possible to find policy functions that citizens value but that suffer from poorly implemented programs. This comparison would suggest where local officials should focus their attempts to improve a community's general well-

being. When used with extant performance measurements, community QoL provides local officials with more useful information by allowing them to craft evaluation strategies that indicate what is happening to citizens as new services and programs are implemented. This would help make local governments more responsive to local needs and more capable of effectively evaluating their own performance. Likewise, by comparing QoL data for entire populations at large with population segments, governments can draft new programs or review existing ones designed to reduce social inequalities.

Furthermore, a major problem in assessing public performance is the difficulty in judging the final social outcomes stemming from the work of public agencies. In this regard, public agencies frequently are evaluated based on the outputs they produce. Performance measures can create conditions of “goal displacement,” where the means replace the goal itself (Bohte & Meier, 2000). Given that community QoL allows local governments to capture how citizens experience, perceive, and evaluate the consequences of a policy, its use enables outcome- and results-based performance management to establish better performance measurement systems.

### ***3. Combining Local Trends with External References***

This study found that local policy decisions are open to external factors such as the community characteristics of a city’s neighbors, state mandates, and neighboring governments’ policies. Such external factors also are likely to influence modification of citizen needs. By comparing their own community conditions to those of other areas, citizens adjust their preferences and demands for various services and programs. Use of external references to judge community QoL has substantial implications for performance management techniques.



Many local governments measure and report their performance. With the desire to improve city operations, the concerns with inter-jurisdictional comparisons grew in the 1980s and 1990s under the banner of benchmarking (Ammons, Coe, & Lombardo, 2001). The management technique compares a city's own processes or performance to those of a desired counterpart and attempts to identify and adapt best practices. On the other hand, other studies such as Milbrath (1979), Myers (1987, 1988), and Swain & Hollar (2003), argue that crucial information is locally specific and longitudinal data on change in a community's circumstances are critical, because special local features shape a community's general well-being. Being more concerned with specific trends in the locality over time, local government officials can consider citizen preferences in responding to changes in local circumstances and governmental actions.

Despite the strengths of both approaches, it is unwise to rely on benchmarking or local trends alone for performance comparisons. People evaluate their community circumstances based on relative references, such as a person's own experience and the situations of other people. As a local economy develops, this study suggests that more diverse citizen preferences for city amenities become prominent, and the local politics of the allocational policy arena are important. Local governments implement various local policies to address a broad array of citizens' demands. Local circumstances affect local politics, which in turn shape city operations to achieve a community's general well-being. Comparisons with other localities that do not consider a city's own local circumstances may not fully serve the interests of local decision makers who seek to improve community QoL. Likewise, relying on local trends may not provide appropriate strategies to identify and adapt best practices to respond to new citizens' demands. By comparing themselves with and researching other localities, local governments can keep their competitive advantages. It is necessary to pay attention to both internal trends and external

references in performance comparisons to extract more useful information from benchmarking.

The performance comparisons can help local governments to set reasonable expectations for services and to identify where change is needed to improve service delivery.

## **Chapter 7 - Conclusion**

This chapter concludes the study. The first section briefly summarizes the findings and their implications. Despite the theoretical and practical implications of QoL, there are several limitations that further studies should address. Based on the limitations, the chapter ends with suggestions for future research on QoL and public policy choices.

### **A. Summary**

Everyone wants to live in a good place. Citizens expect governmental actions to maintain higher levels of QoL or to improve lower levels. Responding to this desire to live in a good place has become an increasingly important focus of local governments. Accordingly, to increase responsiveness and to attract and retain people, local governments pay attention to QoL issues in their communities. Despite growing concern with QoL, however, it still remains unclear to what extent community QoL affects local policy decisions. Furthermore, since different policy functions affect local circumstances differently, the impact of QoL on local policy decisions was expected to vary by policy area. To address this issue, I looked at the relationships between community QoL and governmental expenditures in three policy areas at the city level, using Peterson's (1981) policy scheme. The direct relationship between community QoL and city spending among policy functions was examined by simultaneously incorporating the entire range of potential influences including economic, political, institutional, and demographic factors that affect local policy decisions.

In addition to examining the direct effects, I hypothesized that the impacts of QoL vary depending on city income levels. Traditional perspectives on city growth have for a long time

viewed economic affluence as a sufficient condition for a desirable living environment and describe citizens as people primarily motivated by economic interests. However, an alternative body of research has begun to recognize the limited effects of economic conditions on QoL and emphasizes the impact of other features of urban environments such as city amenities. These competing perspectives suggest a moderating role of city income levels in local policy choices that reflect citizens' demands for community well-being. The sub-samples of cities I examined demonstrated that the effects of community QoL on local spending indeed did vary by relative city income levels.

The current work found that local policy decisions are shaped by many factors drawn from various theoretical perspectives. Local policy decisions are a complex function of factors that have different impacts on city government expenditures depending on the type of policy. The findings suggest that various political actors are pervasive in shaping policy choices. Moreover, community QoL is an important influence on policy decisions at the city level. The impact of community QoL on government expenditures appears to be moderated by relative city income levels. The results show that the impact of economic benefits on QoL is limited beyond a threshold point at the city level. The differential effects of community QoL on local policy decisions attest not only to the effect of the threshold point but also to local spending priorities that evidently reflect evolved citizen preferences. Similarly, the differential effects suggest that the relative influences of political actors alter depending on local circumstances.

Based on the finding that community QoL has a differential effect on local policy decisions depending on the type of policy, this study suggests several theoretical and practical implications of QoL. First, the findings highlight adjusted policy priorities at the city level. Citizens are concerned with allocational services including city amenities, along with economic

interests. Unlike Peterson's expectation, citizens' demands appear to evolve with local economic development. The study supports an argument that residents believe that allocational policies give a city a competitive edge over other cities; governments evidently respond in cities where material well-being is relatively achieved.

Second, with regard to local politics, I contend that it will continue to be prominent in local policy decisions. Citizen preferences for developmental policies adjust to the economic development of a city. As a new environment for urban governance, local economic progress is likely to affect consensual politics and to enlarge political activities in local policy decisions. The differential effects of QoL broaden understanding of the dynamics of local politics associated with political actors' emergence and prevalence.

Third, I maintain that community QoL can address some issues in performance management, foster the use of extant performance information, and facilitate better government management and policy decisions. Community QoL can help local government officials to understand the outcomes of governmental actions on citizens' lives and to capture citizens' experiences of the policy process. By combining or comparing community QoL with extant performance indicators, the increasing use of performance information can enhance the possibility of the success of performance management systems. Additionally, given that both external factors and internal factors affect the modification of citizen needs, considerations of benchmarking along with internal trends can help local governments to set reasonable expectations for services and to identify where change is needed to improve service delivery.

## **B. Limitations and Suggestions for Future Research**

With these findings and their implications, I hope to expand understanding of local government and urban politics. Even so, future studies might address several limitations in this research. In this section, after providing these limitations that should be considered as critical suggestions for future studies, I propose several suggestions for extending current work and consolidating a theoretical model in this study.

### ***1. Limitations***

Although this study employed year-dummies to explain variation over time in city government expenditures, the data-set used is not based on multi-year observations that would have made it possible to analyze potential time-lag effects in the hypothesized relationships. Further study is necessary to evaluate variation over time and across cities by using a longitudinal or a pooled cross-sectional time-series design. The latter would enable one to examine the full range of cross-sectional and longitudinal covariation between government spending and QoL. In particular, given that changes in QoL are likely to occur over the longer term, such designs would provide more rigorous evidence of the impact of QoL on policy decisions.

Another limitation of this study concerns the selection of variables. For instance, the research incorporates only a few of many different aspects of city demographic and socioeconomic characteristics. A full test of a technocratic model of local policy decisions would need to include a much broader array of demographic variables. To more clearly tap local political circumstances, further studies should include other variables such as the number and

types of interest groups, the level of political contestation, and the strength of political constituencies.

This study used instrumental variables estimation to estimate the impact of community QoL. However, because of the difficulty of finding valid instruments for all policy functions, only developmental policy was examined using 2SLS. Given the potential endogeneity of citizens' perception of community QoL with the policy decision process, further studies should be more concerned with alternative instruments that can cover all policy types.

Historical effects such as the 2008 economic recession also may be evident given the timing of the surveys. As cities struggle to balance their budgets in times of fiscal crisis, the results in the later surveys could be dramatically different than earlier in the decade, especially if local decision makers attempted to reflect greater citizen preferences in making hard choices to avoid elimination of service provision that closely affect citizens' lives.

Moreover, this study only examined QoL levels in cities surveyed at the request of each local government. The responsive cities analyzed in this study limit the generality of the results to all U.S. cities.

## ***2. Suggestions for Building a Model***

The present study was designed to examine the relationships between the level of community QoL and policy choices in three distinct policy types in part to draw attention of public administration scholars to QoL. The findings also may help local government officials to better understand complicated and changing citizen needs, which in turn may result in more responsive policy decisions. However, given this study's reliance on overall perceptions of community QoL and roughly classified policy functions, its results are not directly relevant to

the use of community QoL indicators. More detailed and specific evidence is needed to fully appreciate the significance of QoL and to consider QoL indicators in actual policy decisions.

Depending on local issues and specific policy categories, levels of community QoL may or not strongly influence policy decisions. Given the circumstances, QoL indicators, of course, can be considered differently in taking concrete action. Hence, future research needs to consider which and how community QoL indicators local governments use in various policy areas such as public safety, education, transportation, recreation, and public welfare. For instance, future research might test the proposition that *the level of QoL is likely to be positively associated with recreational spending at the city level, but the relationship is stronger in cities with higher income levels.*

Additionally, further research should continue to investigate the impact of community QoL on other stages of the policy process such as agenda setting, alternative consideration, policy formation, and policy implementation as well as policy decisions. For instance, one might investigate *whether and under what conditions QoL is a strong predictor of citizen participation in agenda setting or whether volunteers or non-profit organizations under conditions of higher levels of community QoL are more likely to collaborate with local government officials in policy implementation.*

Variations in governmental responsiveness across cities, as well as the use of QoL indicators can be understood in part by considering the administrative procedures developed by local decision makers and individual bureaucracies to process citizen needs (Mladenka, 1981). The personal attitudes and understanding of public officials responding to citizen needs can affect the citizens' perceptions of community QoL and local policy priorities. Whether local officials can see their main roles as performing ombudsman functions in the decision making



process or serving as executors of public policy might have a significant effect on governmental responsiveness, which affects community QoL. Accordingly, in addition to citizen perceptions of community QoL, scholars should consider public officials' understanding of community QoL and its determinants.

Lastly, within the reciprocal relationship between QoL and public policy decisions, the focus of this research has considered only part of the relationship: the impact of QoL on local policy decisions. To fully understand the relationship between QoL and public policy, future study needs to include government spending at time  $t-1$ , community QoL at time  $t$ , and government spending at  $t+1$ . Such a design would capture the reciprocal relationship between government spending and community QoL affected by previous policy decisions. It would extend the theoretical model this study proposed and provide more rigorous evidence of the impact of QoL. Future study of the impact of QoL or the use of QoL indicators will not only help administrators set their policy priorities, improve governmental responsiveness, and effectively implement public policies. It also further scholarship that builds on the theoretical model and the findings of this analysis.

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## Appendix A. The City List Selected

Municipal	Survey Year							N
	2002	2003	2004	2005	2006	2007	2008	
Alamogordo, NM					480			480
Albany, GA							735	735
Ankeny, IA		576		548		465		1,589
Ann Arbor, MI						1,134	931	2,065
Appleton, WI	638							638
Asheville, NC							402	402
Aurora, CO							610	610
Benicia, CA					400		384	784
Bettendorf, IA					533		507	1,040
Blacksburg, VA		913			819			1,732
Bonita Springs, FL				513				513
Bowling Green, KY							263	263
Bozeman, MT				553		500		1,053
Burlingame, CA						403		403
Cape Coral, FL				320		415	360	1,095
Chandler, AZ						709		709
Cheyenne, WY						527		527
Chula Vista, CA					808			808
Clearwater, FL							724	724
Corvallis, OR							483	483
Dallas, TX				1,891	1,632	1,192		4,715
Daytona Beach, FL						289		289
DeKalb, IL				394		277		671
Delaware, OH						442		442
Delray Beach, FL						287	332	619
Denver, CO	1,185	974	1,003	1,019	740	785	941	6,647
Dover, DE			384	385	381	372	323	1,845
Dover, NH			444					444
Duncanville, TX						346		346
East Providence, RI							372	372
Eau Claire, WI		607				542		1,149
Englewood, CO						361		361
Evanston, IL		516				922		1,438
Farmington, NM						432		432
Federal Way, WA							920	920

Municipal	Survey Year							N
	2002	2003	2004	2005	2006	2007	2008	
Fishers, IN					424			424
Gainesville, FL							264	264
Gaithersburg, MD						248		248
Grand Prairie, TX					256			256
Gresham, OR		790	769					1,559
Henderson, NV			407	462	373	357		1,599
Highland Park, IL	632			637			500	1,769
Livermore, CA			1,216		1,000	789		3,005
Lodi, CA						336		336
Lynchburg, VA			431		410		358	1,199
Lynnwood, WA	979				361			1,340
Maplewood, MN			359					359
Marysville, WA	511							511
McAllen, TX			399		404		231	1,034
Melbourne, FL				425				425
Missouri City, TX	434							434
Morgantown, WV					337			337
North Las Vegas, NV		271			242	243		756
Novi, MI					419		367	786
Oak Park, IL							425	425
Oakland Park, FL						221		221
Oceanside, CA	400							400
Oviedo, FL				396		445		841
Palatine, IL						964		964
Palm Bay, FL		448		443	425	401		1,717
Palm Coast, FL	678	558	489	553	539	472	495	3,784
Palm Springs, CA		391						391
Palo Alto, CA		556	579	509	495	438	415	2,992
Park Ridge, IL							555	555
Pasadena, TX	233	290	272		240			1,035
Pasco, WA				302		245		547
Plano, TX							270	270
Reno, NV	399	339						738
Renton, WA							282	282
Richmond, CA						610		610
Rio Rancho, NM							350	350
Rock Hill, SC	380			349			293	1,022



Municipal	Survey Year							<i>N</i>
	2002	2003	2004	2005	2006	2007	2008	
Rockville, MD							837	837
Salina, KS					503			503
San Ramon, CA			517					517
Sandusky, OH			494		368			862
Sanford, FL							258	258
Sarasota, FL				897	604		736	2,237
Scottsdale, AZ		987	941			360		2,288
Sioux Falls, SD							1,015	1,015
Skokie, IL		536			468			1,004
Smyrna, GA							313	313
Springfield, OR	399							399
St. Cloud, MN				436				436
State College, PA						409	358	767
Stillwater, OK						337		337
Stockton, CA						294		294
Sunnyvale, CA						340	339	679
Titusville, FL				483		427		910
Troy, MI				543				543
Tucson, AZ		866						866
Walnut Creek, CA						441		441
Wheat Ridge, CO							1,065	1,065
Wichita, KS					966			966
Wilmington, NC			401					401
<i>N</i> (Respondents)	6,868	9,618	9,105	12,058	14,627	18,777	18,013	89,066
<i>N</i> (Municipalities)	12	16	16	21	27	39	36	167

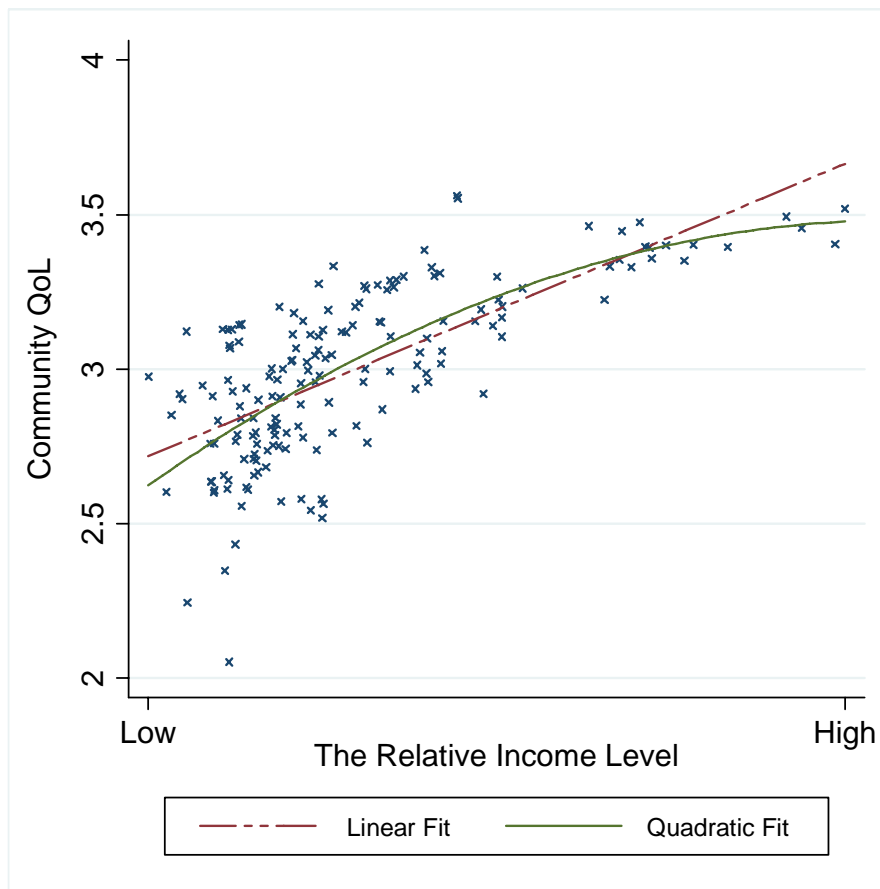
### Appendix B. Estimates for Developmental Exp. by 2SLS and OLS using Predicted Values

Variables	Lower Income Cities				Higher Income Cities			
	2SLS (with IVs)		OLS (with Predict Values)		2SLS (with IVs)		OLS (with Predict Values)	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Com. QoL	0.904**	0.452	1.213 *	0.678	- 0.313	0.733	- 0.302	0.704
Demo. votes	- 0.001	0.009	0.002	0.010	0.008	0.009	0.008	0.010
PCI	- 0.033	0.212	- 0.155	0.254	0.356	0.367	0.341	0.350
In. cities	- 0.261***	0.067	- 0.291***	0.076	- 0.208***	0.080	- 0.195 **	0.078
Form of Gov	- 0.275	0.179	- 0.195	0.182	- 0.190	0.348	- 0.214	0.360
Tax Limit	- 1.186***	0.253	- 1.229***	0.283	- 0.102	0.519	- 0.138	0.575
White	- 0.283**	0.118	- 0.308**	0.135	- 0.015	0.124	- 0.012	0.135
Elderly	0.657***	0.152	0.705***	0.183	0.131	0.141	0.152	0.139
Pop. Growth	0.468***	0.131	0.487***	0.154	- 0.222	0.135	- 0.228	0.143
dum_02	0.155	0.246	0.200	0.285	- 0.378	0.430	- 0.398	0.472
dum_03	- 0.331	0.276	- 0.319	0.293	0.145	0.286	0.134	0.306
dum_04	0.126	0.242	0.104	0.259	- 0.089	0.352	- 0.069	0.373
dum_05	0.226	0.257	0.163	0.274	0.409*	0.232	0.414	0.250
dum_06	0.105	0.236	0.053	0.265	0.141	0.258	0.171	0.259
dum_07	0.289	0.290	0.195	0.301	- 0.098	0.252	- 0.068	0.256
<i>N</i> =	72		72		94		94	
<i>F-value</i>	10.14***		10.59***		2.11**		2.19**	
<i>R</i> <sup>2</sup>	0.591		0.5859		0.198		0.2110	

Note: Unstandardized coefficients and robust standard errors are reported;

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

### Appendix C. The Scatter Plot of Community QoL versus City Income Levels



Appendix B depicts the scatter plot of community QoL versus relative city income levels. In the plot, which followed a quadratic fit ( $R^2 = .515, p < .001$ ), the relative city income level explains 51.5% of the variation in community QoL. The quadratic model is a better fit than a linear model ( $R^2 = .494, p < .001$ ). In using the proportion of positive community QoL responses, the  $R^2$  of the quadratic model ( $R^2 = .426, p < .001$ ) is also better than a linear model ( $R^2 = .388, p < .001$ ). Appendix B shows the relationship between local economic resources and community QoL, with a declining increase in community QoL for the higher income level cities.

## **Appendix D. The Measures for Community QoL, Local Public Service, and Government Performance**

Community Quality of Life (Endogenous variable) is a composite index of the following items:

( $\alpha = 0.976$ )

- How do you rate [City Name] as place to live? (1) Excellent – (4) Poor
- How do you rate your neighborhood in [City Name]? (1) Excellent – (4) Poor
- How do you rate the overall quality of life in [City Name]? (1) Excellent – (4) Poor

Local Public Service (Instrument variable) is a composite index of the following items:

( $\alpha = 0.928$ )

- How do you rate the overall quality of “land use, planning and zoning”? (1) Excellent – (4) Poor
- How do you rate the overall quality of “garbage collection”? (1) Excellent – (4) Poor
- How do you rate the overall quality of “services to seniors”? (1) Excellent – (4) Poor

Government Performance (Instrument variable) is a composite index of the following items:

( $\alpha = 0.958$ )

Please rate the following categories of [City Name] government performance.

- The value of services for the taxes paid to the city. (1) Excellent – (4) Poor
- The overall direction that the city is taking. (1) Excellent – (4) Poor
- The job the city government does at welcoming citizen involvement. (1) Excellent – (4) Poor
- The job the city government does at listening to citizens. (1) Excellent – (4) Poor