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Politics, Institutions, and the Implementation of Growth Management Policy in Florida Cities

In-Sung Kang

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POLITICS, INSTITUTIONS, AND THE IMPLEMENTATION OF GROWTH MANAGEMENT POLICY IN FLORIDA CITIES

By

IN-SUNG KANG

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The members of the Committee approve the Dissertation of In-Sung Kang defended on March 25.

_____
Richard C. Feiock
Professor Directing Dissertation

_____
Donald A. Lloyd
Outside Committee Member

_____
Frances Berry
Committee Member

_____
Lance deHaven-Smith
Committee Member

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

DEDICATED TO THE FATHERS IN HEAVEN

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ABSTRACT

This study originated from the following two questions: to what extent do city governments engage in policy actions to restrict development and manage growth; and how do local political institutions shape the restrictiveness of local growth management?

To answer the questions, first of all, this dissertation identifies variations in the exercise of growth management powers across cities based on financial data gathered from fiscal reports filed with the Florida Comptroller, and policy implementation/adoption data gathered in a mail survey conducted by the author in collaboration with Richard Feiock and Antonio Tavares. Information on city level political institutions and governing structures is gathered from the International City Management Association's (ICMA) 2001 Form of Government Survey.

Based on information about growth management expenditure and policy adoption/implementation, this study examines a broad set of government institutions extended to include the size and organization of city councils and standing committees. This research focused on the implementation and exercise of discretionary powers as well as policy adoption in relation to growth management based on a political market approach. In the political market approach, focusing on the demander and supplier help us understand internal forces of growth management policy. Finally, acknowledging that the underlying theory of institutions in this work is applicable to cities, this study attempts to identify cities' spatial impact on expenditures for growth management. Referring to policy diffusion theory, we review the impact of neighboring cites' on comprehensive planning expenditure as identifying the internal and external forces by using of political market and spatial effect model.

In this research, the followings are the core parts we focus on implementation of growth management policy: local comprehensive planning expenditures, zoning request approval, and policy enforcement of the innovative policies. We considered the role of local institutions as supplier, political economy demands, and municipal context. For the hypotheses tests, we employ three different kinds of statistical analysis: spatial regression, ordered probit, and probit analysis.

CHAPTER 1

INTRODUCTION

Many communities are facing the problems caused by urban sprawl and the problems. These problems include traffic congestion and air pollution, loss of farmland, spatial mismatch between the job and residential locations of skill workers, and the high cost to taxpayers of providing roads and other infrastructure for development on the outlying fringes of urban areas (Nelson et al. 2004). However, there are some benefits associated with urban expansions. Communities have an opportunity through growth and development to create opportunities to expand their revenue bases, develop new programs, or enhance their regional political influence.

However, growth and development also present political challenges as they create pressures and challenges in terms of environmental resources, distribution of power and wealth, and quality of life in the community. Cities confronted with these new opportunities and challenges respond in varying ways. Even communities with the same powers, mandates, and policy instruments may use them differently, thus resulting in differences in whether cities facilitate and accommodate development or manage and restrict development. Ben-Zadock (2002) has documented great variation in the fiscal support for planning and growth management functions in local budgets. In addition, it is extremely difficult to measure the restictiveness of individual communities' land use regulations, mainly because of two reasons. One is that land use regulations are unique in each local government with interjurisdictional variation in the specific provisions of similar-sounding measures (Ihlanfeldt 2004). Second, city government's policy implementation including interpretation and enforcement significantly affects the restrictiveness of land use regulation. For example, cities may differ tremendously in terms of their willingness to grant zoning variances and enforce strict land regulatory policies.

This study attempts to find the answer to the following two questions: To what extent do city governments engage in policy actions to restrict development and manage growth?; And how do local political institutions shape the restrictiveness of local growth management? While

these two questions are central to debates regarding local land use regulation and growth management, they have not been adequately addressed in the literature. Existing research has focused primarily on local action mandated by state level legislation, or on the adoption of growth management policy instruments. Though this research has provided valuable insights, it neglects intercity variation in how regulatory authority is exercised and how policies are implemented.

Recent work has directed attention to how government institutions shape land use decisions (Gerber and Phillips 2003; Feiock 2001, 2002; Feiock & Lubell 2003). This dissertation will build on this research by identifying variations in the exercise of growth management powers across cities based on financial data gathered from fiscal reports filed with the Florida Comptroller, and policy implementation/adoption data gathered in a mail survey conducted by the author in collaboration with Richard Feiock and Antonio Tavares (Feiock & Tavares 2003). Information on city level political institutions and governing structures will be gathered from the International City Management Association's (ICMA) 2001 Form of Government Survey. For Florida cities that were not respondents to the ICMA survey, a mail/internet/telephone survey of city clerks has conducted. This survey partially replicates the ICMA instrument to recover data on many cases.

This dissertation makes unique contributions to the literature in three ways. First, it examines a broader set of government institutions. Extant research has examined the forms of government and elections but has not extended to the institutions including the size and organization of city council and standing committee. Second, while most previous work has been more narrowly focused on policy adoption (Tavares 2003), this research focuses on the implementation and exercise of discretionary powers as well as policy adoption in relation to growth management based on political market approach. The political market approach focusing on the demander and supplier help us understand internal forces to growth management policy. Finally, it examines cities rather than counties which have been the focus on most previous works (Feiock 2001). While the underlying theory of institutions in this work is applicable to cities, it has only been tested on counties. Moreover, this study attempts to determine cities' spatial impact on expenditure for growth management. Considering Berry and Berry's regional diffusion model (1990)[1], we examine the impact of neighboring cites' on comprehensive

[1] The regional diffusion model includes the neighbor model and fixed-region model. The neighbor model of

planning expenditure. Therefore, we can identify the internal and external forces by using the political market and spatial effect models.

The remainder of this chapter reviews the urban politics literature focusing on the typologies of local policy, the role of local government institutions, and the key actors in local political systems. These provide the building blocks for the theoretical framework developed in chapter 3.

Chapter 2 provides an overview of growth management and growth management policies in Florida. Chapter 3 develops the theoretical framework to guide the empirical analysis. Chapter 4 describes the methodology and research design. Chapter 5 discusses empirical analysis and findings. Chapter 6 presents the conclusions of this research.

City Politics

From the political economy perspective, cities provide the venues where stakeholders express their interests, where competition takes place, and where government authority envolves. According to Logan and Molotch (1987), there are some components that comprise growth politics in cities: land-based elite, elite competition, government authority, and local power structure or institution. Land-based elite shares a common interest in growth and seeks profits by increasing intensification of the land use. In particular, elites make an effort to attain the resources for their own area in competition with other land-based elites. Under these circumstances, government authority plays an important role in promoting city growth at the expense of competing localities and setting the limits within which localities make a decision on the land use, the public budget, and urban social life. In addition, the local power structure reinforced by government authority functions as the most important constraint upon available options for local initiative in social and economic reform.

Building from the growth machine framework, we consider the political process in the local community situation. There are many community organizations ranging from residential

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diffusion focuses on neighboring jurisdictions' influence on the adoption of innovation. On the other hand, the fixed region-model first identifies several regional areas and assumes that diffusion occurs within the same region following within-jurisdictions' adoption of innovations. This classification of the regional diffusion model provides sophisticated explanation for the regional diffusion process, but it is difficult to draw the boundaries of the fixed-region.

block clubs and neighborhood associations to city or metropolitan chambers of commerce and regional development agencies. Governmental political institutions provide formal as well as informal constitutions. Certain interests in the community attempt to use government to gain those resources which will enhance the growth potential of the area in question. Due to the scarcity of developmental resources, land-use interest groups compete for public money and attempt to mold regulatory decisions which will determine the land-use outcomes. Localities thus compete with one another to gain the preconditions of growth. Thus, individual land-owners aggregate to extract neighborhood gains from the city government considering the resource is finite (Molotch 1976).

This political process in city government represents the dynamics of contemporary local growth politics in terms of political economy that emphasizes the allocation of public resources and the ordering of local issue agendas. In order to seek their growth interests, local communities keep in mind that these governmental powers can create the physical conditions for industrial growth as well as maintain a business climate that attracts industry.

Type of City Politics

Domain theory argues that local politics consists of differing spheres or domains, each with its own unique political characteristics and policy issues (Sharp and Elkins 1991). The theory has strong points in terms of clear contrasts and uniformities of the policy domains. Namely, it clearly distinguishes economic development from the basic, housekeeping functions of city government. Furthermore, it emphasizes uniformities within each domain of city government even though the uniformities of domain theory may be overstated (Jones and Bachelor 1986).

In the meantime, openness and public involvement of the theory is not typical. Rather, the politics of development is relatively closed, quiet, and elite-dominated. In Sharp & Elkins's case study, however, economic development decision making seems much more controversial and politicized with the relatively high levels of citizen involvement that are supposedly characteristic of only the politics of allocation (Sharp & Elkins 1991).

Furthermore, we can consider Peterson's policy typologies in the relationships between

public policy and political processes. First, citizen participation and group formation are affected only insofar as the economic consequences of a policy are recognized by policymakers. Second, any particular proposal on a civic agenda may have elements within it that are developmental, others that are redistributive, and others that are purely allocational (Peterson 1981). Based on the domain theory, in particular, there have been important contrasts between the spheres of developmental politics and allocational politics.

Development Politics

Development politics involves government subsidies and regulations that promote firms' investment and employment within the jurisdictions. In practice, municipal governments make plans to attract industry to a community, to expand its transportation system, or to renew depressed areas within its jurisdiction. Such policies aim to benefit all residents of the jurisdiction in terms of socio-economic well-being: downtown business, laborers' higher wages, homeowners' housing values, new job creation for the unemployed, and politicians' reelection (Peterson 1981).

The domain of developmental politics, which is concerned with many policies of interest for economic development, is characterized as being a highly centralized, behind-the-scenes, consensual, and business-elite dominated form of politics. Peterson (1981) describes development policies as often promulgated through centralized decision-making processes involving prestigious businessmen and professionals. In the process of development politics, prestigious businessmen and professionals play an important role in representing and securing the community interests in highly centralized decision-making environment. Similarly, Dye (1991) argues that commercial elites are predominant in the domain of developmental politics. Adding a contingent perspective on the elitist-pluralist debate of community power studies, Dye argues that reputations for power correlate with the reality of power when the issues specified are developmental issues.

In addition to development policy elites, the citizens role has been increased to affect development policy-making. Some research has argued that with respect to local development efforts, participation of citizen would be a very important factor and may block policies, such as, tax abatement, which may have substantial apparent costs (Sharp and Elkins 1991). Feiock and

Cingermayer (1993) also found that active neighborhood organizations have also been shown to affect development policy-making. Clavel (1986) supported the idea of citizen participation by arguing that citizen activism, particularly interacting with advocacy planning, may produce progressive policies.

In the developmental area, it is more important for the decisionmakers or stakeholders to secure the power of persuasion rather than capacities for social control. Under the community setting, there would not be clear-cut winner or loser. In theory, power is best understood as a zero-sum game, where one person or group wins at the expense of another. However, power within the city is better understood in the way the community as a whole realizes its policy goal and objective (Peterson 1981).

Allocation Politics

Compared to development politics, allocation politics seems not to have a big impact on the interests of cities in that it may merely distribute local resources among residents based on the economic prosperity of the area. On allocation issues, however, there would be severe disputes among those who are united behind developmental policies and uniformly opposed to substantial redistribution. Faced with the disputes or conflicts, they change patterns of coalition formation constantly as participants find new allies with changing issues (Peterson 1981). Thus, allocation policy choice would be characteristically a compromise among competing interests and the terms influenced by the political leaders' electoral concerns.

In addition to resource distribution of allocation politics, the domain of allocation politics, which deals with typical, distributive services such as snowplowing and garbage collection, is characterized as open, visible, competitive, controversial, and pluralistic. Peterson (1981) describes this domain as follows:

> It is a continuing, thriving, potentially explosive political arena that…often subjects decision-makers to intense political heat… The widely held view that local politics is an arena of bargaining, compromise, cross-cutting cleavages, and changing political issues is not incorrect. On the contrary, such a view depicts and characterizes the most visible aspects of…the allocational arena. (165-166)

Dye (1991) provides a similar characterization of decision making concerning allocational matters:

> The allocational policy arena is pluralist in character…public officials are responsive to the expressed demands of many varies and often competing groups within the community. Participation in decisionmaking is open…Interest and activity rather than economic resources are the key to leadership in allocational policy. (43-44)

Redistribution Politics

Redistributive politics is related to those policies which serve needy members of society in spite of its negative impact on the community's economic growth. Since redistributive policies are usually at odds with the economic interests of the city, proponents typically will find difficulty in gathering support for them. The politics of redistribution at the local level is thus an arena where certain kinds of citizen needs and preferences seldom become demands (Peterson 1981).

Meanwhile, some research indicated that the participation of citizens and particularly low-income citizens encourages redistributive policy-making in a variety of policy arenas (Hill and Leighley 1992). Many scholars have found that such things as citizen participation, active neighborhood organizations, reformed political institutions, professionalized city bureaucracies, and minority council member representation may curb development policy efforts or permit redistributive policy initiatives to be implemented (Sharp 1991). The scholars admit that as Peterson proposed, economic constraints and legal limitations may encourage the development activity. However, they point out that local government officials have other concerns on their minds and at least some autonomy to pursue other objectives. These objectives may include the transfer of benefits to some of the neediest of their citizens and geographic locations (Clingermayer and Feiock 1995).

In fact, proposals for economic growth gain access to the local political agenda with greater ease than do proposals calling for social redistribution. Cosidering the nature of redistribution politics, however, it is essential for city government to consider low-income residents and deal with redistribution policies. Given the large number of low-income residents in central cities, many redistributive programs would have a significant impact on city government's economic growth as well as politics.

Growth Management Politics

Government and Growth Management Politics

Growth Management can be defined as "the deliberate and integrated use of the planning, regulatory, and fiscal authority of state and local governments to influence the pattern of growth and development in order to meet projected needs" (Nelson et al., 2004). Based on this definition of growth management, neglected in this political market approach is the ability of government to act independently of the push-pull forces of the growth machine and antigrowth coalitions. Political rationality suggests that the consensus of the community, which might not be evident, should be determined by the elected and administrative officials (Elkin 1985). Government's ability to act as an independent yet responsive actor depends on its ability to set up policy responses that consider urban conditions and growth goals. Agenda-setting of growth management issues is the challenging job for all levels of governments.

Growth management is an alternative government role in growth politics which relies on government's authority to institutionalize regulatory and planning powers. A broader authority can help or force local governments to equitably frame the competition of local growth politics and promote long-term uniformity in government's approach to development and growth according to state standards. This additional dimension of government's role in growth politics provides the power to manage the benefits and costs of growth, not just exercise regulatory power over the growth machine (Turner 1990a).

Growth management is a role in which government pursues benefit equity by ensuring that the costs of economic development and growth are proportionately borne by those that will profit from city growth policies. Exactions such as impact fees are an extension of government intervention as a means to integrate the public interest into the land use process (Nicholas 1986).

Growth management requires a directive role by government. The dilemma is over the degree to which the state will intervene in local decisionmaking and the degree to which the locality will adhere to state standards that will produce the best growth results. Those who direct and control the rule of the game are dealing from a position of strength and are therefore better equipped to affect the outcome and the distribution of benefits (Stone 1980). Thus, inserting rational policy planning from the state into the highly politicized local setting of growth politics

will require incessant effort in order to maintain the benefits of intervention and state control.

State governments are increasingly becoming an alternative locus of decision authority. Florida has been on this track since 1972 as has Oregon and other states (DeGrove 1984). Most recently, New Jersey has created a state intervention strategy. The state's concerns over quality of life issues and housing affordability led to the 1985 State Planning Act. The purpose of the Act was to create "a coordinated, integrated, and comprehensive plan for the growth, development, renewal, and conservation of the state and its regions" (Lawrence 1988). Vermont, Rhode Island, and Georgia have state comprehensive planning laws on the books.

Institutions and Growth Management Policy

When we say "institution," the term institution can be defined with several meanings. There are two sorts of scholars who define the institution as an organizational entity and rules. The former scholars define that institution is an organizational entity such as a family, business firm, political party, or university. On the other hand, the latter scholars refer institution to the formal and informal rules operating within or across organizations (Ostrom 1990). In this study, we follow the second position on the institution. Douglas North gives further for the position by saying that the institution is defined as "the rule of game in a society or, more formally, the humanly devised constraints that shape human interaction" (North 1990). Most importantly, the perception of institutions as constraints implies that institutions as rules can prescribe a series of action related to organizational performance and social change.

With regard to local politics or government, institutions have a significant impact on policy area in that they affect what changes can be accomplished and through what channels. Moreover, institutions shape individuals' action and preferences, provide stability to collective choices, minimize transaction costs, limit choices, affect policymakers' behavior and preferences, and provide incentive for political change. Institutions have important functions in organizing local politics: institutional arrangements reduce uncertainty and increase the stability of collective choice. First, institutional arrangements shape individual actions by offering incentives and disincentives to engage in certain behaviors. Second, institutions can reduce uncertainty by providing premises for decision-making and supplying particular channels for information to travel through and among organizations. Third, institutions can provide stability

in collective choices since they make individuals comply with the pattern or practices of being institutionalized (Williamson 1985; North, 1990; Ostrom, 1999; Clingermayer and Feiock 2001).

Considering the pivotal roles of institutions in local politics, many scholars have studied how the constraints and incentives derived from institutions influence the choice and performance of local governments. This work argues that institutions matter because they provide incentives for political change and they affect political policy outcomes. Most works have attempted to find linear additive effects from local institutions. Although some studies have demonstrated that reform institutions predict the adoption of certain policies (Morgan and Hirlinger 1991; Elkins 1995), only modest direct effects on policy choices could be identified by examining the impact of institutions on the aggregation and articulation of preferences. The study on the adoption of development policy tools (Fleishmann, Green, and Kwong 1992) did not show significant effects of local institutions on local development policy. However, the choice of instruments or mechanisms for policy intervention has received increasing attention (Linder and Peters 1989). Along this line, Feiock and Kim (2000) studied impact of form of government on development activity and found that form of government had interactive effects through mediating the effect of certain economic conditions and administrative arrangements on development policy. Their findings support the conclusion that form of government may have non-additive or interactive effect by influencing levels of government responsiveness to exogenous economic, political, and bureaucratic demands.

Related to development policy choices, there are two perspectives: all cities have a unitary interest in promoting development (Peterson 1981) or they have various interests depending upon the constituencies and political incentives of local elected officials (Clingermayer and Feiock 1990). Extended to policy implementation/adoption, following the second perspective, research interests focus on the extent of impact institutions give to cities' implementation/adoption of development policy. This issue is critical for the efficiency and the distributive consequences of development policy implementation. For this study, it is meaningful to examine the role of government administrative structures, development organizations, and bureaucracies based on electoral incentives (Feiock and Kim 2000).

Political/Governmental Institutions

The class conflict inherent in the battles between machine politicians and urban reformers derives from their different background. The strength of the machine lays in the low-income ethnic communities usually located to the commercial and industrial heart of the city. Meanwhile, reformers appealed to native-born, middle-class residents living in more pleasant, outlying homogeneous areas. Machine politicians themselves were often second-generation immigrants of working-class origin who used their political influence to enhance their economic well-being. Reformers consisted largely of professionals and progressive businessmen who had been educated at respectable universities and who had little common social background with proponents of the ward organizations (Peterson 1981).

Machiners and reformers addressed different mechanisms to promote the city's economic and other interests. Reformers argued that through the nonpartisan and at-large election of the leaders, they would guard the overarching interests of the city. In other words, reformers preferred citywide elections, short ballots, centralized governing institutions, and the application of universalistic norms in the provision of government services. On the other hand, machiners favored ward elections, long ballots, decentralized governing arrangements, and a close connection between government, party, neighborhood, and ethnic association. Therefore, governmental efficiency depends upon responsiveness to the neighborhood, party, and ethnic particularities.

Institutional rules of the game in reform governments provide incentives for an emphasis on citywide issues and constituencies as they place constraints on the politicization of administrative issues. In the unreformed context, the rules provide constituencies incentives for the emergence of narrow issues and constraints on the elevation of technical expertise over popular responsiveness (Sharp 1997).

Three dimensions of reform have most often been identified as potentially affecting public policy outputs: partisan versus nonpartisan elections; ward-based versus at-large elections; and city manager versus mayoral administrative leadership. Lineberry and Fowler (1967) argued that reformism affected policy outputs by isolating bureaucratic decisions from the divisive demands of the electorate. Furthermore, in reformed cities, bureaucrats are known to be more responsive to the demands of the middle class for less spending and lower taxes, an assumption

which the size of the middle class is most strongly associated with size of government.

Governing institutions, like the form of government, are expected to shape the relationship among economic demands, administrative organizations, and economic development activity. The council-manager form of government has long been viewed as a means to insulate local decisions from high-power political incentives (Lineberry and Fowler 1967). Council-manager government may enhance local officials' ability to match development policies to specific needs, rather than to simply respond to political pressures for new development initiatives.

Institutional complexity is an important determinant to affect growth management policy and its implementation. Institutional complexity would be either barriers or facilitators for policy implementation. For the high level of institutional complexity, in particular, innovative policy implementation involves many elected officials and bureaucrats across branches or within a single branch of a given level of city government. In implementing the policy, extensive public input and citizen participation is required. In addition, it is not easy to implement or change the policy with the complicated administrative and parliamentary requirements. Under these circumstances, city government must expend substantial resources to overcome the barriers that result in less implementation of innovative policy. On the other hand, a low level of institutional complexity facilitates implementation of innovative policy in that it requires fewer resources and procedures to implement the policy. These institutions include centralization of decision-making authority, few actors, few formal steps, and relatively simple procedures (Gerber and Phillips 2003).

Key Actors in Local Political Market

The Political Market Framework

Municipalities are political systems in which problems of aggregation and representation must be factored into the process by which local bundles of goods and services are set. This process has been described as a political market (Alston 1996; Feiock 1994; Feiock & Lubell 2003). In the political market framework, the supply and demand forces play an important role

to drive institutional changes. It implies that the institutional change is the result of a political process or contract between the demanders and suppliers in the political market framework (Alston, 1996). From the perspective of the demanders, the primary interest of political market is on economic incentives and benefits of citizens and the interest group. In terms of suppliers, on the other hand, it incorporates the role of government actors as the suppliers and expands understanding of political benefits and process.

Through a dynamic political contracting process, we assume that both the demanders and suppliers seek to maximize their own benefits. Each side attempts to maximize their benefits by changing or adopting new institutions since institutions draw a guideline for the rule of the game. As for the demanders, depending upon the consequences of institutional change, they would change their preferences. They may oppose the institutional change if the change negatively affects their property rights. According to some scholars' arguments, the demanders will have great resistance to institutional changes to redefine property rights and affect the decision-making regarding resource allocation, and result in negative consequences on their private interests (Libecap 1989; Eggertson 1990; Gerber 2001; Feiock & Lubell 2003).

On the other hand, suppliers such as politicians and bureaucrats attempt to maximize their own utility or benefits, although they are often oriented to public-regardingness (Banfield & Wilson 1963). The interests of politicians may be particularly affected by the structure of local electoral systems and by variation in how different electoral systems translated local voice into policy demand (Schneider 1989). In addition, the interests of politicians and bureaucrats can vary, and different bureaucratic agencies can hold divergent interests in service levels with regard to the allocation of local resources. In order to attract desirable resources, local governments enact policies they believe will increase their local benefit/cost ratio.

It suggests that the product of institutional change may be somewhat dissimilar from what the demanders initially intended. In local political market, differences between the preferences and goals of subunits within municipal governments exist, and the associated bureaucratic politics make policy setting and service goals difficult. Thus, distributional conflicts between the demanders and suppliers are unavoidable and can play a critical role in political bargaining or political power game between them. In this situation, local decisions are further complicated by the nature of municipal governments in a democratic society. Considering weak competition for public goods and weak constraints on the freedom of

producers in the local market, the strategic interests of suppliers become important in the public market. In particular, suppliers such as politicians and bureaucrats influence the actual determination of the bundle of goods and services a municipality offers. Moreover, the suppliers can face resistance from the demanders who insist on maintenance of the current status quo as causing the increase of transaction costs between them (Jeong 2004).

Participants in the Local Political Market

In local political systems, we can identify the three prime participants as the local community actors: public officials, city residents, and local business organization (Feiock and Carr 2001). In general, public officials approach local politics by considering rewards for winning election or in the case of re-elected officials influence local market politics by bureaucratic decision rules and local service delivery. For residents, there would be issues in terms of homeowners/renters and groups by income. In the case of the local business organizations, their participation in local politics is shaped by the costs and benefits of these actors. They are interested in minimizing costs and maximizing profits. In the political market approach, we can classify these three participants into either supplier or demander. In this study, we see public officials (government) as suppliers and residents & business (interests) organization as demanders.

Residents

According to the political market framework, local constituents such as citizens and business groups demand institutional change to maintain the status-quo in order to protect their property rights (Alston 1996; Feiock & Lubell 2003). Citizens and interest groups as demanders, depending upon the consequences of institutional change, would change their preferences.

Residents have different perspectives on the way they evaluate the relative value of local services and the burdens of local taxes. There are at least three different positions depending upon their positions in terms of homeownership, income, education, race, and partisanship. Homeowners are more sensitive to the costs of local taxes than renters because for the typical homeowner, the local property tax bill is concrete and increases in property taxes are direct and

palpable (Fischel 1985). Property tax costs of local services are more diffuse for the renter and their impact can be hidden if local property taxes are not separately enumerated on rental contracts (Schneider 1989).

Income and educational attainment distribution significantly affect residents' well-being in a community. Many literatures describe growth management as having some characteristics of exclusion, elitism, and status orientation (Molotch 1976; Navarro and Carson 1991; Donovan and Neiman 1992). There is also the hypothesis that individuals with higher income and educational attainment are more likely to support growth management. Thus, we can assume that cities with higher median income and educational attainment levels are more likely to be interested in growth management policy. Present residents extract a fiscal dividend by limiting entry to individuals with incomes and education level higher than theirs.

For attracting individuals with high income and education, there would be two issues to consider through municipal services. First, as we see in the case of a municipal park or beach, once a service is provided, excluding community residents may be legally impossible. Second, even though higher income individuals with expensive houses pay more taxes than individuals with less expensive ones, wealthier residents do not necessarily get more services in return for their higher tax payments due to the openness of local public services (Jones et al. 1980).

Considering the issues above, there would be conflicts between income groups within communities. In a heterogeneous income community, lower income residents may prefer more services even at higher tax rates, but upper income residents prefer less government. Homogeneous high income communities face less potential redistribution problems than do heterogeneous communities. To avoid the redistribution problems, homogeneous income communities adopt exclusionary zoning, a rational strategy that is widely pursued (Schneider and Logan 1982).

Racial differences are another distinctive characteristic of the residential community. Increasing numbers of blacks and other racial minorities are now moving to suburban residences. According to Clark and Ferguson's study, suburban blacks prefer higher levels of public services than whites (Clark and Ferguson 1983). It derives from the fact that blacks have, on average, lower incomes; therefore they may need more public goods and services. On the other hand, different preferences might also result from the fact that the blacks are more recent migrants into suburbia and may have developed a taste for the higher levels of services by central cities

(Schneider 1989). Under the situation, whites do not want to spend more money for public good and services but have more interests in growth management. Moreover, most of the suburb residents are overwhelmingly white and blacks historically have occupied a small number of black residences.

With regard to partisanship or party ideology, Republicans or conservatives generally favor small government with less regulation and oppose government intervention. Nevertheless, related to some form of growth management, even individuals with strong conservative ideology support growth management policies at the local level since they might consider city government's growth management policy less intrusive to individual choice.

Moreover, conservatives prefer to growth management policy instruments, such as, impact fees, density bonus, and transfer of development rights in that the policy instruments expand local market choices and may appeal to their ideology (Kayden 1992). On the other hand, liberal ideology holds their values in line with environmental policies and conservation and Democrats as liberals have more interests in environmental issues, social services, and government spending. Thus, liberals prefer policy instruments that control development and growth at the local level, such as, zoning, population caps, and urban service boundaries.

Business (Interest) Groups

Firms are primarily focused on reducing their costs and thereby increasing their profits. This motivation drives business to participate in local politics and enter cooperative agreements with other actors in local communities. Local government's need to diversify the local tax base by economic development and create jobs for local residents is congruous with interests of firms and other local actors if local government pays for or subsidizes such growth. To attract the firms in a community, local governments may offer inducements, such as tax abatements or subsidies to improve local infrastructure. However, the cost of inducement reduces the flow of fiscal benefit the local government receives, and subsidies for economic development may lead to net losses (Logan and Molotch 1987).

In spite of local government's effort to induce local firms, it is not easy for local government to control the costs constituting the bulk of business expenses. Firms usually choose their locations which give easy access to raw materials and markets which have low labor costs. In the local political markets, many local governments actively seek economic development and

negotiate fervently with firms.

In terms of business groups, two sets of interests groups to influence growth management policies. One includes developers, builders, land speculators, and mortgage financiers who generally growth management policies. The other groups are organized groups with specific goals like environment preservation, and homeowner association oriented to preserve the character of their neighborhoods and housing prices. Basically, the groups are likely to favor land use and growth management policies (Knaap 1988).

First of all, development interest groups may oppose new regulatory rules, but the citizens with environmental interests who prefer higher quality lifestyles may seek innovative regulation or policy program to cope with rapid economic development and consequent deterioration of public facilities.

In addition, environmental groups as antigrowth groups may support growth management policy. Antigrowth groups typically consist of local neighborhood groups and environmental groups who emphasize public costs of growth such as traffic congestions and environmental deterioration (Schneider 1992; Schneider & Teske 1993). Most antigrowth groups are reactive to urban growth, but they are less organized and powerful than development interest groups.

Politicians and Bureaucrats

As the supplier in political market, politicians and bureaucrats approach the market with different preferences and interests. Politicians' first priority is to win election, so that they may accomplish policy goals by remaining in office. To win the election, local politicians must appeal to the constituents by providing better public service. Local politicians increase the likelihood of winning election by responding to citizen and group demands. But the benefits of this strategy are realized only if local taxes are kept low. Thus, politicians need to cooperate with local business firms so that they may benefit from improving their community's tax base. Since the local business firms contribute to improving the municipality's benefit/cost ratio or tax base, cooperation with the firms is important for the local politicians to be reelected.

Politicians and bureaucrats attempt to maximize their own utility or benefits, while they are often oriented to public-regardingness (Banfield & Wilson 1963). Bureaucrats' preferences are often shaped by bureaucratic and professional norms. As for the bureaucrats' role in local market politics, we need to keep in mind that bureaucratic decision rules can often influence the

level and distribution of local services. Rather than local politicians, bureaucrats and their decisions significantly impact the level and distribution of local public services. With regard to the relationship between politicians and bureaucrats, politicians are assumed to be either neutral to demand or helpless in the face of bureaucratic power. In a municipality with strong political parties, politicians may play an important intermediary role in bureaucratic decisions, increasing demands on the local bureaucracy and influencing the services delivered by the local government (Jones 1981).

In the local market politics, public officials have operational power with both sticks (regulations) and carrots (incentives) to structure local markets. While the sticks are regulations and punishments that fall upon developers who break the existing rules, the carrots come in the form of financial rewards for those whose activities are a calculable public service. In William Niskanen's view (1971), bureaucrats seek to maximize agency budgets, since budgetary expansion allows them to achieve a variety of goals. Niskanen argues that a bureaucrat can increase his salary, perquisites, etc., only by increasing his budget or by demonstrating that he can manage another bureaucracy with a larger budget. Budget maximization, thus, probably explains most of the use of managerial discretion in a bureaucracy.

CHAPTER 2

THE GROWTH MANAGEMENT IN FLORIDA

Background

Florida is the state that showed how to inject rational policy direction by centralizing authority, creating a uniform process, and supporting an agenda of utilitarian benefits through government intervention. This policy has contributed to changing the relationship between the state and its local governments and, ultimately, the impact on the role of government in growth politics. Over a 15-year period (1970-1985), Florida evolved from a state without land use regulation and comprehensive planning to a state with control over growth management by means of a state-regional-local planning process. It also evolved into a state with guidelines and requirements for local comprehensive planning (Turner 1990). The state has increased its role in the growth planning process by mandating government intervention, setting rational state standards and requiring local consistency. It has shifted the role of both state and local governments from that of growth facilitators to growth managers.

In the early 1930s, the negative impact of unplanned growth began to appear, especially when southeast Florida's coastal water supply was threatened by saltwater intrusion into the freshwater aquifer that supplied most of the drinking water for a rapidly expanding population. By the late 1950s, the critical situation caused by unplanned growth became increasingly apparent in the form of extensive destruction of wetlands; bulldozing of beach and dune systems; the continued threat of saltwater intrusion into drinking water supplies; the extensive pollution of lakes, rivers, canals and estuary areas; and many other such problems. These and other negative impacts of unmanaged growth caused Florida to get interested in growth management planning. Faced with these problems, Florida began serious and comprehensive efforts to manage its growth coincident with the increasing strength of the environmental movement in the nation and in the state. Two sets of legislative initiatives, the first in the early 1970s and the second in the

mid-1980s, moved Florida to the fore in terms of state efforts to manage growth (DeGrove 1989).

The set of laws adopted in 1972 focused on giving the state and regional levels a limited role in land and water management. Earlier, this had been largely the tasks of local governments and special districts. In 1975 the legislature adopted the Local Government Comprehensive Planning Act (LGCPA), mandating that all local governments prepare a comprehensive plan. The deficiencies of the LGCPA turned the state's attention to the dilemma of centralization/decentralization of policy authority and direction by posing the question: Which level of government should have the authority to make policy decisions? By concentrating authority at the state level, there is a greater ability to establish long-term approaches to growth throughout the state. Growth politics in a decentralized state makes the process vulnerable to parochial interests concerned with short-term gains rather than long-term solutions to land use problems, thus negating the rational interventionist solution (Turner 1990).

The 1985 Legislative Session adopted the State Comprehensive Plan (Chapter 187, Fla. Stat.) and the Omnibus Growth Management Act, which put in place Florida's new growth management system. It is a system built around three key requirements: consistency, concurrency, and compactness. The consistency requirement established the "integrated policy framework," whereby the goals and policies of the State Plan framed a system of vertical consistency in which state agencies were required to prepare agency functional plans consistent with the State Plan's goals and policies. Regional planning councils were required to prepare regional plans consistent with the goals and policies of the State Plan, and to adopt those plans by rule. In a far-reaching adjustment of the home rule tradition, local government plans were mandated to be consistent not only with the goals and policies of the State Plan, but also with the appropriate regional plan (DeGrove 1989).

The requirement for consistency has two components: internal consistency and external consistency. Internal consistency primarily refers to the requirement that individual plan elements must be consistent with each other. External consistency refers to the requirement that each local government comprehensive plan must be consistent with the State Comprehensive Plan and appropriate regional policy plan. A local plan is defined as "consistent" with the state plan if it is "compatible with" and "consistent" with and "furthers" their goals, policies and objectives [sec. 163.3177(10)(a), Fla. Stat.]. The internal consistency requirement can move local plans into coherent, meaningful, balanced documents for guiding the future of our

communities. In addition, local document regulations, due one year after each local government submits its plan to the state for consistency review, must be consistent with the local plan. Horizontal consistency at the local level is also required in the form of a compatibility requirement that local plans be in harmony with each other.

Concurrency is the most powerful policy requirement built into the growth management system. It provides that the state abandon its long-standing policy of deficit financing growth and substitute for it a "pay-as-you-grow" system. The requirement for concurrency is based on the concept that development and public facilities and services needed as a result of that development should go "hand-in-hand (McKay 1988)." The capital improvement elements must contain progress that ensures facilities and services are available concurrently with the impacts of development at established levels of service standards. No development order or development permit should be issued which would lower the established levels of standards [sec. 163.3202(2)(g), Fla. Stat.]. It is a recognition by the Florida State Legislature that the public sector can affect the location of growth in two ways: first, by the type and intensity of future land uses allocated and second, by when and where public facilities and services are provided. This means that the provision of public facilities and services and the implementation of the comprehensive plan through land development regulations are the forces that will affect the way the cities and state look in 20 years.

As for the third requirement, compactness is related to urban development goals and policies built into the State Comprehensive Plan. It is reflected in regional plans as well as in the State Land Development Plan that provides standards for state land development decisions. The policy goal of compactness is to separate rural and urban uses and to discourage urban renewal as it makes maximum use of existing infrastructure. Growth management system with regard to compactness makes Department of Community Affairs (DCA) play an important role in the compactness requirement in that DCA is responsible for consistency review of local plans, play (McKay 1988).

The 1985 Growth Management Act (GMA) and subsequent clarifications represent a major change in Florida's approach to growth management and land use regulation. The state is assuming a stronger proactive role through growth management in order to uphold the larger public good. The GMA approach to the government intervention dilemmas goes beyond setting uniform rules of the game. It sets the desired outcome of the game as well by mandating state

standards for growth management. This fundamentally affects the economic costs and benefits scenarios established at the local level. The heart of the growth management system is the preparation of local plans and implementing regulations, which are consistent with the goals and policies of the state and regional plans, including the key requirements of concurrency and compactness. Success in this complex and very difficult intergovernmental environment lies in balancing a close adherence by local government to State Plan goals and policies, and other statutory and rule requirements with a strong technical assistance effort by DCA to help local governments meet the requirements of the system. In turn, local governments need to take the new requirements seriously, break with many loose planning practices of the past, and submit plans to the state that meet the consistency requirement (Turner 1990).

Innovation in Growth Management Policy in Florida Cities

Many Florida communities have faced challenges related to growth and development. Growth and development create opportunities for communities to expand their revenue bases, develop new programs, and enhance their regional political influence. However, growth and development also result in political challenges as they may threaten environmental resources and the quality of life in the community as well as alter the distribution of power and wealth within the community. Cities in Florida have confronted these new opportunities and challenges in varying ways.

It has been almost two decades since Florida's Growth Management Act (GMA) was enacted in 1985. While this legislation created a top-down approach to the implementation of growth management through a mandatory comprehensive planning process, it has left considerable room for policy innovation at the local level. Using data from a recent survey of city planners in Florida, this brief reports the frequency with which Florida cities use several innovative land use policy instruments <Table 1>. The policies examined here include impact fees, density bonuses, performance zoning, and transfer of development rights.

Impact Fees

Impact fees are payments or dedications made by a developer for the right to proceed with a project requiring government approval (Dresch and Sheffrin 1997). Impact fees are generally regarded as a technique to manage rather than reduce growth because they make development rights more certain while they shift the burden of financing new infrastructure from existing owners to developers. They are particularly popular in communities experiencing financial stress and strong growth pressures because property tax revenues are unable to keep pace with new infrastructure demands.

Basically, impact fees are a sophisticated mechanism for shifting from a municipal part of the cost to the development capital investment necessitated by new development. In tune with the spirit of age, impact fees are more complicated than the earlier charges in that they widely cover the range, extending to any municipal capital expenditure required to meet the needs of the inhabitants of the new development. At the same time, they are subject to the restraints of a new calculus considering the marginal impact of the new development upon a municipality. Thus, impact fees have been extensively dealt with courts and in a newly developed area of planning expertise (Cullingworth 1993).

Density Bonuses (DB)

Density bonus programs are also known as incentive zoning. A density bonus is a technique that works in different direction to traditional zoning. Whereas traditional zoning is concerned with avoiding negative externalities through land uses and aims to limit these conflicting uses, a density bonus allows developers to build at higher density at the expense of the social and environmental amenities for positive externalities. Thus, density bonus programs exempt developers from certain existing zoning restrictions in exchange for the provision of commodity goods, such as parks, open space areas, schools, and affordable housing (Goldberg and Chinloy 1984).

This technique is considered a market-based approach since the price at which the local

government buys each community good reflects the amount of bonus provided to the developer. Developers have typically been enthusiastic supporters of density bonus approaches because they allow them to build at higher densities, reducing land and site development costs and diffusing costs over a large number of housing units. In addition, density bonuses have proven politically and programmatically appealing to local officials. For these reasons, they are used frequently by fiscally stressed local governments as a means for satisfying citizens' desires for public goods.

Performance Zoning

Performance zoning, otherwise known as flexible zoning, differs from the traditional zoning in that performance zoning permits more adaptation and variation in land use than conventional zoning. Different from traditional zoning and planning systems, performance zoning allows land development to conform more to market requirements. Its goal is to improve the planning system by streamlining the development process, increasing certainty over development permissions and approvals, and reducing the costs of negotiating with local planners. For this, performance zoning gives the developers a kind of quality control targets and relatively wide discretion in meeting those targets. With those targets, developers can put development plans and packages together tailored more to the investor's market expectations than the views of the city's planning department.

In some respects, the performance zoning technique is advantageous to the potential for development in the market because the developers have more control over the final outcome and decisions are handled administratively based on published criteria weighed through formulas in the zoning codes (Jaffe 1993).

Transfer of Development Rights (TDR)

TDR allows the development rights of a parcel of land, as part of the right to convert, to be sold and used on another parcel. Therefore, TDR makes it possible for there to be a free exchange of development rights without having to buy or sell land. The idea behind TDR is to

provide a mechanism by which private developers or local government can purchase the development rights from within an area (the sending areas) and transfer them to an area to be developed (the receiving area). The owner of the preserved site retains existing use rights while receiving compensation for the development value of the land. TDR is designed to minimize the objections to such zoning with freezing of the development potential because it allows the owner of protectively zoned property to recover the economic value of the property's frozen potential as well as lessen the economic impact of protectively zoned property. TDR is a useful technique to preserve environmentally sensitive areas, agricultural land, open space, and historic landmarks. In addition, it is a market-type transaction involving low costs to the public and provides compensation to landowners for the loss of the right to develop.

The most common TDR program allows the landowner to sell the development rights to a developer who then uses those development rights to increase the density of houses on another piece of property at another location. A second approach to TDRs allows a local government to establish a TDR Bank to transfer rights. With this method, developers who wish to develop at higher densities than current zoning restrictions allows would purchase development rights from the local government (Lawrence 1998).

Implementation of Growth Management Policy

Along with the adoption of the innovative growth management policies, in practice, it is necessary to review how well the innovative policies are implemented in the jurisdictions. In general, implementation of policy can be seen with different angles to understand the policy. Thus, policy implementation covers extensive interests and perspectives concerned with the purpose or goal of a policy, performance of the policy, and outcomes or effects of the policy. Related to policy implementation, in particular, growth management is believed to function as a mechanism to control supply and demand of housing construction and land development. It can reduce supply by increasing construction and development costs of obtaining project approval, through review delays, higher permit fees and greater compliance costs. In addition, it can increase the price of vacant residential land by restricting the amount of raw land that is allowed to be developed (Anthony 2003; Holcombe 2001; Staley and Gilroy 2001). In this research, the

followings are the core parts we focus on implementation of growth management policy: local comprehensive planning expenditures, zoning request approval, and policy enforcement on the innovative policies.

Local Comprehensive Planning Expenditures

The comprehensive plan has become a cornerstone of American city planning since its introduction by Cincinnati in 1925. It provides local governments a statement of goals and policy, a guide to decision making, and a legal document for land use controls (Hollander et al. 1988). City governments may have a different fiscal expenditure for local comprehensive planning depending on the political environment, institutions, and community characteristics in place.

Zoning Request Approval

Matters have changed dramatically since the early days of zoning, but even the earliest zoning schemes provided some relief from the strict letter of the law (Cullingworth 1993). However carefully drafted, a zoning ordinance and map can never cover all the circumstances that might arise or all the possibilities that might come to pass. Thus there has to be some way to provide for the unknown. There are four main methods of doing this: by way of variances use permits, conditional decision, up-zoning decisions (higher density), and down-zoning decisions (lower density).

While a conditional use is one which is permissible under the conditions of the zoning ordinance, a variance involves a relaxation of the provisions of the ordinance. There are two types of variances: area variances and use variances. The former involves a departure from the requirements of the ordinance in relation to such matters as lot width, lot area, setback and the like. By contrast, a use variance allows the establishment or continuation of a use which is prohibited by the ordinance.

There are some uses which, though permissible and perhaps necessary, require review to

ensure that they will not have an undesirable impact on an area. Hospitals, schools, day-care centers, and clubs, for example, are needed in a community, but their specific location may give rise to traffic congestion and dangers, or to severe parking difficulties. Zoning ordinances typically make specific provision for such special exceptions. The exception is different from a nonconforming use that is explicitly allowed but subject to the conditions detailed in the zoning ordinance. This is why the term conditional use is preferable.

While an up-zoning may not be welcomed to the neighborhood, an amendment to rezone to a use of lower density, a down-zoning is often the result of neighborhood pressure. Since a down-zoning is likely to reduce the value of undeveloped land, the landowners are likely to object one.

Stringency of Regulatory Policy Enforcement

The stringency of regulatory policy through regional and local mechanisms suggests that its impacts on growth management can be extensive. Thus, it is important to understand not only the stringency of regulatory policy, but also the consequences of the policy. Developers will assess communities based on all characteristics of the prospective site, including the local regulatory environment. The regulatory policy for growth control indicates how a given city responds to tighter controls of regulatory policy. City governments can strictly enforce the regulatory policy to enrich landowners by restricting the amount of developable land, therefore by raising land value (Staley 1997).

The optimal degree of stringency depends on the city's overall growth conditions. In addition to influential regulatory policy on growth management, implementation of the regulatory policy also has a significant effect on the city's growth management policy. In other words, the stringency of policy enforcement affects implementation of growth management policy. Depending upon the degree of policy enforcement, capacity of policy implementation varies in each city government. The regulatory policy instruments include permitted land uses, density of land use, setbacks, site review, special study/impact assessment, building standards, mandatory real estate hazard disclosure, and retrofitting of private structures. For successful policy implementation, city governments reinforce the level of policy stringency through use of sanctions and penalties.

CHAPTER 3

THEORETICAL FRAMEWORK

The Role of Local Institutions as Supplier

Policy decision at any level of government are framed by a set of institutions that determine what changes can be accomplished and through what channels. Institutions are important in local government because they shape individual actions and preferences, provide stability for collective choices, influence transaction costs, and limit available choices to decision makers (Grafstein 1988). Municipal charters specify the positions and powers of office. For example, the creation of a city manager position, the bureaucratic organization of land use functions, and the form and frequency of elections are formal institutions that can influence land use incentives and outcomes at the local level (Clingermayer and Feiock 2001). In this study, institutions as the suppliers include the form of government, system of election, council, and standing committee. Furthermore, we can examine these four institutions in terms of institutional arrangements and complexity.

Proposition 1 – Institutional Arrangements: Mayor-Council government and at-large election are likely to have a relationship with expenditure for comprehensive planning and implementation/adoption of growth management policies.

The choice between professional management or reformed institutions and unreformed institutions have been thought to play a significant role in shaping the types of policies pursued and the extent to which polices are actually executed and implemented. The form of municipal government defined in the city charter is likely to have an impact in implementation because elected executives and professional managers have different values, orientations and career

objectives and incentives leading to distinctive support for the same policies. Professional managers are more concerned with their careers as managers supporting efficient and budget-wise decisions. On the contrary, elected officials are more interested in furthering their political careers and are more prone to satisfy popular demands in exchange for votes. The mayor as an elected official plays the dual roles as a bureaucrat and politician. As a bureaucrat, the mayor seeks to maximize his control of public resources, so budgetary expansion allows achieving a variety of goals (Niskanen 1971). The other role as a politician makes him provide quality services to his constituents, so he can increase the likelihood of remaining in office (Schneider 1992). Based on the dual roles, the mayor involves in growth management politics related to development politics that characterizes professionals' highly centralized decision-making process with broad and continuous local support (Peterson 1981). Thus, the strong mayor plays an important role in growth management politics. According to Schneider, Teske, and Mintrom (1995), the presence of a strong elected executive position in local government was related to the emergence of pro and anti-growth entrepreneurs in cities.

The system of election is also commonly thought to affect policy implementation among local governments. Gerber and Phillips (2003) argue that majoritarian institutions, such as at large elections, independently elected mayors, and citizen boards are likely to reflect the preferences of the majority of the citywide electorate. However, district based elections are frequently associated with the distribution of benefits to local constituencies by the elected officials that are able to target these benefits to specific groups that can help them achieve reelection. In this situation, district-based elections of the city council could lead to an emphasis on "not in my backyard" politics, and thus less enthusiasm for residential development (Lewis and Neiman, 2002). In order to curtail logrolling and parochial behavior, the reform movement advocated at-large elections to select the members of the municipal legislative assemblies.

In contrast with ward elections, at-large elections are thought to favor community-wide attitudes and policies, particularly if the community is racially diverse. In predominantly white communities, at-large elections can be unresponsive to minority concerns and hence prone to criticism (Dye 1991).

Proposition 2 – Institutional Complexity: Cities with large council size and standing committee will be negatively related to comprehensive planning expenditure and implementation/adoption of growth management policies.

Institutional complexity in local legislative processes has been recently linked to local growth management. According to Gerber and Phillips (2003), institutional arrangements including large council size and the use of standing committees create high entry barriers for policy advocates. In political systems that involve many actors, they argue that policy advocates must expend substantial resources to overcome the barriers in policy enactment and implementation. Therefore, legislative systems characterized by decentralized policy making, many actors involved, and relatively complex implementation procedure would advantage development interests over growth management. We expect that as the size of the council increases, the transaction costs of implementation will be higher, making it difficult for city government to implement policies. In addition, since an increased number of council members has to mobilize more resources to implement policy, it negatively affects planning expenditure and policy implementation.

Standing committees on the council contribute to procedural complexity by increasing the number of actors involved in policy making. The participation of standing committees implies that there are additional steps in the policy process. Thus, we assume that the number of standing committees will be negatively related to expenditure of planning and policy implementation/adoption.

Political Economy Demands

The local market for public goods is also driven by a political economy linking the structure of local government to decisions about service and tax bundles. The desire to maximize the local tax base is a key ingredient of this political economy. As opposed to the private market, the local public market for public goods has weak forces which transform local government service decisions into a set of responses directly mirroring the interests of local consumers. Both economic and democratic political theory emphasize the need for competition

to enforce consumer sovereignty (Schneider 1992).

Based on the assumptions of Tiebout (1956), a large body of literature has studied the idea of the existence of a quasi-market for local public goods. In the assumptions of the Tiebout model, consumers as residents are interest maximizers making rational decisions about where to live, that is, residents make "buying" decisions with their feet by moving from one local government to another that provides them better boundles of services. Meanwhile, providers as the business group are also interested in s local government that allows them to do business with less stringent growth management regulations. Given his concern for a "pure theory" of public goods, Tiebout was able to concentrate on citizen/consumer sovereignty. However, it is necessary to have a more developed model that takes into account the motivations and interests of key actors including public officials, residents, and business (interest) groups who influence growth management budget and policy implementation.

Along with the needs of the more developed model, Peterson (1981) added a prescriptive element to this model by arguing that communities attempt to attract wealthy residents so that they can increase their tax base. The pursuit of this goal generates competition among governments affecting the decisions of growth management budget and policies made by local public officials. Peterson contends that government will avoid redistributive policies because redistribution imposes higher taxes on wealthier residents leading them to move to communities with lower taxes.

While some studies confirm the existence of local markets for public goods (Teske et al. 1993), Lowery and Lyons (1989) concluded that voice and contracting are more important than the exit mechanism embodied in the Tiebout model. Even though there is debate on this issue, it is clear that the local environment and market in terms of political economy matter when dealing with growth management policy implementation. More expensive programs will not be implemented if local officials fear the crowding-out of wealthier citizens would put their community in fiscal stress. However, if the Tiebout/Peterson hypothesis is not correct, wealthier communities are likely to be the ones implementing the most expensive public programs. Likewise, the local environment and market around local government may affect the implementation of growth management policies.

In terms of political economy, demanders in the local market have different incentives and interests. We explore the interests of demanders whose actions drive the local market,

assessing the degree to which their interests are homogeneous and identifying the source of conflict between them. We will see the demanders' preferences and interests considering diversity of residents, political ideology, and business demand.

Proposition 3 – Diversity of Residents: Cities with the high level of white people, personal income, homeownership, education are expected to have a positive relationship with expenditure for comprehensive planning and implementation/adoption of growth management policies.

The characteristics of community residents, such as, race, income, homeownership, and education diversity in the community shape incentives in support or opposition to comprehensive planning and growth management policy implementation/adoption. First of all, racial diversity or difference is one factor to affect growth management expenditure and policy implementation/adoption. Whites live in suburbs and blacks historically have lived in a small number of black suburbs. However, there is tendency that the racial minorities are finding suburban residences. In addition, they are more likely to demand more public goods and services to give the community fiscal burden (Clark and Ferguson 1983; Schneider & Logan 1982a). Thus, it is assumed that racial diversity would impact the expenditure and policy implementation of growth management.

Second, growth management policy is affected by income diversity in a community. Present residents extract a fiscal dividend by limiting entry to individuals with incomes higher than theirs. In this situation, the community will favor strict policy implementation through exclusionary zoning and other land use policies (Schneider and Logan 1982). Considering this, we expect that cities with the high personal income would prefer the high level of expenditure and implementation/adoption on growth management policy.

Third, the extent of homeownership influences growth management policy in that homeowners are more sensitive to the costs of local taxes than renters. Since a household's property tax bill is a direct function of the value of its house, the homeowners in a community attempt to attract rich newcomers so that they may strengthen their local tax base. Therefore, typical homeowners have a strong interest in stabilizing the property tax by affecting growth management policy.

Finally, education attainment by the percent of high school graduates would have a significant impact on the growth management policy and expenditure. Because people with high education attainment level have a greater chance to own his own house with the stable income source, they prefer strict growth management policy, seeking to live in a quiet and peaceful community. So, they would support spending more money for comprehensive planning and strict policy implementation.

Proposition 3-1 – Ideology of Residents: Cities with high percentage of Democrats would have a negative relationship with implementation and adoption of growth management policies.

Ideology in terms of party identification is also central to understanding the way government restricts private development. Republicans not only favor less government regulation and intervention, but also advocate privatization and economic development activity. Meanwhile, Democrats are more supportive of environmental concerns, social service, and government spending. Thus, we assume that liberal communities and governments dominated by the Democrat would have negative impacts on implementation and adoption of growth management policies.

Proposition 4 – Business Demands: Cities with more employees in real estate development and construction firm would have a negative relationship with expenditure for comprehensive planning and implementation/adoption of growth management policies. Also, cities with high level of environmental interests would have a negative relationship with implementation and adoption of growth management policies.

Local business groups, such as the Chamber of Commerce, might be expected to approve of local population growth and more housing, whereas neighborhood groups are often reputed to oppose such growth (Lewis and Neiman 2002). Business group activities through developers, builders, and environmentalist might also influence growth management policy. Three sets of interest are particularly relevant: developers, builders, environmental interests. Economic interests of contractors and developers have a substantial interest in land use policies because

implementation of regulatory policies has consequences for the private risk and return on their investments and production activities. In the case of environmental interests, they do not support implementation nor adoption of growth management policies since they believe any growth management policy is not helpful to preserve desirable environment conditions. Therefore, developers and builders would have a negative impact on planning expenditure and implementation/adoption of growth management policies. In addition, environmental interests would have a negative impact on implementation and adoption of growth management policies.

Municipal Context

Growth context is closely related to internal and external factors of municipalities. While the internal factors would be growth, land change, and population in municipality, external factors are associated with county level factors, such as county population, expenditure, and density.

Rapid population growth results in a wide variety of social problems in such areas as transportation, housing, environments, and crime rates. It also raises more significant concerns, including a higher demand for newly constructed houses and the consequent increased demand for the construction of new infrastructure and/or the expansion of existing public facilities (Jeong 2004).

Regions that are growing quickly may create more pressure to accommodate growth locally, but such growth may also arouse more citizen controversy. And communities with high degrees of transiency, or population turnover, may have different reactions to housing proposals than more settled communities, or than resort communities with many part-time residents. Higher rates of population growth at the county level are associated with a less stringent review process at the local level (Lewis and Neiman 2002). Larger communities, and central cities in particular, may be somewhat more distinctive in their orientations toward growth (Lewis 2001; Neiman, Andronovich, and Fernandez 2000). Larger communities tend to have a greater number of active political groups, and larger city governments, which may lead to the development of more policies. Diaz and Green (2001) find that in Wisconsin, municipal populations are positively associated with the adoption of growth management tools.

According to Frank and Downing (1988), states that experience greater population growth account for a large number of growth management policies, especially California and Florida. One reason to count on the growth management policy is that rapid population growth causes a higher demand on new developments such as new housing and buildings. Another reason is that the demand for new developments will necessitate a significant amount of financial resources to accompany infrastructure construction. In the municipal context, we can examine two factors: growth pattern as the internal variables and county influence as the external variables.

Proposition 5 – Growth Pattern: Growth, density, and land change are positively related to expenditure for comprehensive planning and implementation/adoption of growth management policy.

Since the growth management policies are closely related to the extent to which existing growth patterns threaten a community's natural resources and quality of life, the economic and physical characteristics of cities affect policy implementation/adoption of the growth management. In other words, rapid population growth results in a wide variety of social problems in the areas of transportation, housing, environments, and crime rates. Moreover, it causes the most significant concerns which include a higher demand for newly constructed houses and the consequent increased demand for new infrastructure constructions and/or the expansion of existing public facilities.

As growth pressures intensify, many citizens will begin to demand growth management in order to preserve community character. The benefits of growth control that restrict development would be greatest where rates of development are high, but low density, non-urban land is scarce, and open space is limited. Thus, cities with high growth rates, density rates, and land change would have positive impacts on expenditure for comprehensive planning and implementation/adoption of growth management policies.

Proposition 5-1 – County Influence: County population and comprehensive expenditure, number of cities in county, and unincorporated population are positively related to cities' expenditure for comprehensive planning and implementation/adoption of GM policy.

Cites and counties have a close relationship with growth management policies in that cities take into account population and expenditure of its county. Besides, depending upon the number of cities and unincorporated populations in a county, city expenditure and implementation of growth management policy would be changed. Cities would attempt to avoid its citizen's exit to other city or unincorporated areas as appealing to citizen by spending more money for comprehensive planning and strict implementation of growth management policy.

CHAPTER 4

RESEARCH METHOD AND DESIGN

Land Use Management Survey

A survey of land use planners and growth managers in all Florida's cities was conducted by the DeVoe Moore Center in early 2002. The survey gathered information on local growth management policy and regulations. The purpose of the survey was to enhance our understanding of how Florida cities deal with the dual pressures of competing for economic development and at the same time managing population growth. 321 of 403 cities responded to the survey, resulting in a response rate of 80 percent. The frequency and percentage of cities that have adopted each of the four programs are reported below. In addition, the frequencies of the use of each of the four programs are reported separately for cities in four population categories: below 2,000, between 2,000 and 10,000, between 10,000 and 100,000, and over 100,000 <Table 1>.

In the case of impact fees, more than half of the cities that responded (52.6%) had adopted impacts fees as a land use management technique. The second and third most frequent programs were density bonus and performance zoning. 53 cities (18.6%) used density bonuses while 23 cities (7.9%) used. Transfer of development rights including both voluntary and mandatory rights was employed by less that 10 % of the respondent cities (7.6%). Large cities were more likely than smaller communities to employ each of these programs. For example, two-thirds of all cities (69.2%) with populations over 100,000 have adopted impact fees. In addition, more than half cities (53.8%) with populations over 100,000 have density bonus policy program.

<Table 1> LAND USE MANAGEMENT TECHNIQUES IN FLOIRDA CITIES

Land Use Management Technique	Frequency (N=251)	Percentage
1) Impact Fees	**153**	**52.6**
City Pop. under 2,000	19	14.1
Between 2,000 and 10,000	39	34.5
Between 10,000 and 100,000	86	61.0
Over 100,000	9	69.2
2) Density Bonuses	**53**	**18.6**
City Pop. under 2,000	2	1.5
Between 2,000 and 10,000	13	11.5
Between 10,000 and 100,000	31	22
Over 100,000	7	53.8
3) Performance Zoning	**23**	**7.9**
City Pop. under 2,000	1	0.7
Between 2,000 and 10,000	2	1.8
Between 10,000 and 100,000	16	11.3
Over 100,000	4	30.8
4) Transfer of Development Rights	**22**	**7.6**
City Pop. under 2,000	3	2.2
Between 2,000 and 10,000	1	0.9
Between 10,000 and 100,000	16	11.3
Over 100,000	2	15.4

These survey findings suggest that Florida cities have favored market-based growth management tools (i.e. impact fees and density bonuses) rather than regulatory growth controls like urban service boundaries. The particularly strong popularity of impact fees is notable given that they are regarded as a market-based growth management technique that is growth accommodating rather than growth restrictive. Moreover, local jurisdictions have adopted some type of impact fees related to fire and emergency services, sewage, water supply, transportation facilities, and parks and recreation. While adoption of impact fees demonstrates that local jurisdictions attempt to find adequate financial source to support growth management, the reliance on impact fees also implies that local jurisdictions lacks the ability of growth management without proper growth management framework (deHaven-Smith 1998).

Growth Management Variables and Indicators

This study will examine the growth management policy implementation/adoption and the

exercise of growth management powers across cities in Florida. This research will combine data from an existing survey, data collection from the FL Comptroller's database of fiscal reports, an ICMA survey, and a mail/internet/telephone survey to examine city officials in Florida municipalities.

We will test specific hypotheses derived from institutions, political economy, and municipal context propositions. As for the dependent variables, there are three variables: per capita expenditure for comprehensive planning, implementation of growth management policy by zoning request approval and regulatory policy enforcement, and adoption of innovative policy instruments including impact fees, transfer of development rights, density bonus, and performance zoning. The first dependent variable is per capita expenditures for comprehensive planning using financial data to be gathered from fiscal reports filed with the Florida Comptroller. As for policy implementation and innovative policy adoption variables, they derived from data gathered in a mail/web/telephone survey conducted in collaboration with Richard Feiock and Antonio Tavares.

As for the independent variables, there are mainly three categories: political/governmental institutions, political economy demands, and municipality context <Table 2>. Information on city level political institutions and governing structures is gathered from the International City Management Association's (ICMA) 2001 Municipal Form of Government Survey. For Florida cities that did not respond to the ICMA survey, a mail/internet/telephone survey of city clerks are conducted. This survey will partially replicate the ICMA instrument. Among the political/governmental institutions, form of government and form of election would be dummy variables. Also, council size and standing committee are measured by the number of commission seats and standing committee.

On the other hand, political economy demands will be measured with two subcategories: resident and business groups. As for residents, it includes the variables, such as, homeownership, income, education, race, and partisanship. Among the resident variables, we will collect data from U.S. census and Florida Statistical Abstract. Five variables including homeownership, income, education, race, and partisan are analyzed by percent of owner occupied household units, median household income, percent of high school graduate, and percent of Democrat.

Next to the residents, business groups cover builder, developer, and environmental interests. For the builder and developer's interests, we will use average construction and real

estate firm size. In addition, environmental interests will be measured by the environmental groups' supportiveness for growth management in the Survey.

In the case of municipal context variables, all the city data for growth, density, and land change derived from U.S. census (2000). County data for county population, planning expenditure, and number of cities, unincorporated population came from Florida Statistical Abstract (2000).

Finally, the table below summarizes the independent variables and how they are measured. The units of analysis will be the population of 403 cities in Florida. Where survey measures are used the sample is restricted to the 321 cities that responded to survey. Dependent variable, per capita expenditure will be estimated using spatial regression analysis based on spatial econometrics.

A spatial regression analysis using spatial econometrics will be very useful since cities as spatial unit raise two problems, spatial dependence and spatial heterogeniety (LeSage 1998). Spatial dependence refers to the fact that sample data observations exhibit correlation with reference to points or location in space. This type of data results in the existence of spatial hierarchical relationships, spatial spillovers and other types of spatial interactivity. Spatial heterogeneity refers to the fact that underlying relationships may vary systematically over space. This creates problems for regression and other econometric methods that do not accommodate spatial variation in the relationships being modeled. Considering OLS (Ordinary Least Square) regression cannot overcome the problems in spatial data, we will employ spatial regression using SpaceStat that estimates the spatial lag and the spatial error regression models by maximum likelihood.

Ordered probit and probit analysis will be employed for implementation of growth management policy and adoption of innovative growth management policies in each. In the case of the dependent variable, implementation of GM, the nature of survey data is categorical and ranges 1 to 5 as 5 scales, so ordered probit will appropriate analytical technique. On the other hand, adoption of innovative GM policies coded by 0 and 1 will be estimated using probity analysis. For the analysis, we will use statistical software program, STATA 11.0.

Table 2. Growth Management Analysis
Dependent Variable: Expenditure/Implementation/Adoption of GM Policy

Variable	*Description*
Political/Governmental Institutions	
Form of Government	Dummy Variable (1=Mayor-Council, 0=Others)
Form of Election	Dummy Variable (1=At-large, 0=District Election)
Council Size	Number of Commission Seats
Standing Committee	Number of Standing Committee
Political Economy Demands	
Resident:	
Race (The White)	% of the White
Income	Median Income
Homeownership	% of Owner Occupied Household Units
Education	Percent of High School Graduated
Voter	# of Voters
Partisanship	Percent of Democrat
Business:	
Builder Interests	Average Construction Firm Size
Developer Interests	Average Real Estate Firm Size
Environmental Interests	Land Use Planning Survey (1-5 scale)
Municipality Context	
City Growth	Rate of Population Increase b/w 1990 and 2000
Density	Population Per Square Mile in 2000
Land Area Change	Rate of Land Change b/w 1990 and 2000
County Population	Number of County Population in 2000
County Planning Expenditure (Per Capita)	County Comprehensive Planning Expenditure
Cities in County	# of Cities
Ratio of Unincorporated Population	% of Unincorporated Population in County in 2000

Variables and Estimation Procedure for Spatial Analysis

Table 3 shows each variable's name, describes the way to measure the variables, and predicts the direction of the variable coefficients.

Table 3. Dependent Variable: City Planning Expenditure
Variable Measurement and Predicted Coefficient

Variable	*Description*	Expenditure
Political/Governmental Institutions		
Form of Government		
	Dummy Variable	-
Council Size	(1=Mayor-Council, 0=Council-Manager)	
Standing Committee	Number of Commission Seats	-
	Number of Standing Committee	-
Political Economy Demands		
Resident:		
Income	Median Income	+
Homeownership	Owner Occupied Household Units	+
Education	Percent of High School Graduated	+
Partisanship	Percent of Democrat	-
Business:		
Builder Interests	Average Construction Firm Size	-
Developer Interests	Average Real Estate Firm Size	-
Municipality Context		
Density	Population Per Square Mile in 2000	+
Land Area Change	% of Land Change 1990-2000	+
County Population	Number of County Population 2000	+
County Planning Exp.	Per Capita Comp. Planning Expenditure	+
Unincorporated Population	% of Unincorporated Pop. 2000	+

Hypotheses

Based on the variable measurement and predicted coefficient in Table 3, we can make the following hypotheses: politics/government institutions, political economy demand, and municipal context.

Politics/Governmental Institutions

H1a: Cities with Mayor-Council form of government are likely to have a negative relationship with expenditure for comprehensive planning.
H1b: Cities with a large council size are likely to have a negative relationship with comprehensive planning expenditure.
H1c: Cities with large standing committees are likely to have a negative relationship with comprehensive planning expenditure.

Political Economy Demands

- Diversity of Residents
H2a: Cities with high personal income are expected to have a positive relationship with expenditure for comprehensive planning.
H2b: Cities with high level of homeownership are expected to have a positive relationship with expenditure for comprehensive planning.
H2c: Cities with a high level of education are expected to have a positive relationship with expenditure for comprehensive planning.
H2d: Cities with more Democrats would have a negative relationship with expenditure for comprehensive planning.

- Business (Interest Group) Demands
H3a: Cities with more real estate development firms are expected to have a negative relationship with expenditure for comprehensive planning.
H3b: Cities with more construction firms are expected to have a negative relationship with expenditure for comprehensive planning.

Municipality Context

H4a: Density rate is positively related to expenditure for comprehensive planning.
H4b: Land area change is positively related to expenditure for comprehensive planning.
H4c: County population is positively related to expenditure for comprehensive planning.
H4e: County planning expenditure is positively related to comprehensive planning expenditure.
H4g: Unincorporated population is positively related to expenditure for comprehensive planning.

Estimation Procedure

Table 4 shows descriptive statistics for spatial analysis using weight matrix. To measure neighborhood interaction by distance weight, we need to set up weight matrix by dealing the missing values of home ownership, education, city growth, land area change with zeros. For the dependent variable, there is per capita comprehensive planning expenditure for 196 cities.

Table 4. Descriptive Statistics for Spatial Analysis

Variable	Mean	Std. Dev.	Min	Max
Comprehensive Expenditure	39.92	125.82	0.23	1,571.98
Form of Government	0.31	0.47	0.00	1.00
Council Size	4.28	2.35	0.00	10.00
Standing Committee	2.82	5.72	0.00	39.00
Median Income	41,568.16	23,765.72	14,923.00	200,000.00
Home Ownership	6,061.13	13,450.95	0.00	157,693.00
Education (High School)	78.99	14.48	0.00	100.00
Percent of Democrat	0.45	0.12	0.24	0.86
Avg. Construction Size	10.41	2.74	3.00	14.80
Avg. Real Estate Size	6.66	1.97	2.50	12.06
Density (Per Sq. Mile)	2,412.00	2,442.59	73.80	15,231.10
Land Area Change	29.82	143.76	0.00	1,941.80
County Population	692,117.70	666,597.50	12,902.00	2,253,362.00
Comp. Expenditure (County) Per Unincorp. Pop.	4.80 1.73	3.57 1.98	0.00 0.05	18.77 7.54

In general, sample selection bias could occur in the case of self selection by the individuals or data units in investigation. In addition, there would be sample selection bias when

sample selection decisions by analysts or data processors operate in much the same fashion as self selection (Heckman 1979).

In this study, sample selection bias concerned with cities that reported comprehensive planning expenditure may arise because the sample data are a nonrandom subset of local governments. If we run OLS without considering this selection bias, OLS will produce biased estimates of true population parameters. To solve the problem, we can use the two-stage Heckman selection model that allows us to safely truncate expenditure data of the cities not reported.

In practice, one does not know λ_i. But in the case of a censored sample, in which one does not have information on Y_{1i} if $Y_{2i} \leq 0$, but one does know X_{2i} for observations with $Y_{2i} \geq 0$, one can estimate λ_i by the following procedure (Heckman 1979):

1) Estimate the parameters of the probability that $Y_{2i} \geq 0$ using probit analysis for the full sample.
2) From this estimator of $B_2/(\sigma_{22})^{1/2}$(=B_2*), one can estimate Z_i and hence λ_i. All of these estimators are consistent.
3) The estimated value of λ_i may be used as a regressor in regression equation fit on the selected subsample. Regression estimators of the equation are consistent for B_1 and $\sigma_{12}/(\sigma_{22})^{1/2}$ (the coefficients of X_{1i} and λ_i, respectively).

Maximum likelihood estimation of the spatial lag model

The spatial lag model or mixed regressive spatial autoregressive model includes a spatially lagged dependent variable, Wy, as one of the explanatory variables.

$$y = \rho Wy + X\beta + \varepsilon$$
$$\varepsilon \sim N(0, \sigma^2 In)$$

where y is a N by 1 vector of observations on the dependent variable, Wy is a N by 1 vector of spatial lags for the dependent variable, ρ is the spatial autoregressive coefficient, X is a N by K matrix of observations on the (exogenous) explanatory variables with associated a K by 1 vector of regression coefficient β, and ε is a N by 1 vector of normally distributed random error terms,

with means 0 and constant (homoskedastic) variances σ^2. The parameter β reflect the influence of the explanatory variables on variation in the dependent variable y (Anselin, 1980).

The presence of the spatial lag is similar to the inclusion of endogenous variables on the right hand side (RHS) in systems of simultaneous equations. The main consequence of the inclusion of Wy on the RHS of the specification is that Ordinary Least Square (OLS) no longer achieves consistency. In this model, the inclusion of Wy in addition to other explanatory variables as a way to assess the degree of spatial dependence, while controlling for the effect of these other variables.

Maximum likelihood estimation of the spatial lag model is based on the assumption of normal error terms. Given this assumption, a likelihood function can be derived that is a nonlinear function of the parameters and must be maximized.

$$L = \Sigma_i \ln(1-\rho\,\omega_i) - N/2 \ln(2\pi) - N/2 \ln(\sigma^2) - (y - \rho Wy - X\beta)'(y - \rho Wy - X\beta)/2\sigma^2$$

with ϖi as the eigenvalues of the weights matrix and the rest of the notation as in the main text (Anselin 1988a).

It also turned out that the estimates for the regression coefficientsts β and the error variance σ^2 can be expressed in function of the autoregressive coefficient ρ. Substitution of these expressions into the likelihood yields a so-called concentrated likelihood function, which only contains a single parameter, the autoregressive coefficient ρ. The traditional R^2 measure of fit, based on the decomposition of total sum of squares into explained and residual sum of squares, is not applicable to the spatial lag model. Instead, a number of so-called pseudo R^2 measures can be computed.

Specifying the Weighting Matrix

Estimation of the system requires that we determine which cities are neighbors. Since estimating the parameters of the W matrix is infeasible, its element must be specified a priori. City j is a neighbor of city i if the citizens and/or decision-makers of city i take into account city

j's fiscal package when they are evaluating their own city's situation. However, it is not easy to find observable variables that capture if or not two cities are neighbors <Appendix A, B>.[2]

There are many reasons we would expect the expenditures of one city and policy implementation to affect the policies of other cities. In this model, citizens look to other cities in order to evaluate the performance of their own legislators. In particular, suppose that consumers compare their current utilities to the utility levels they would obtain if they lived in neighboring cities. In the case of it, legislators worry about the consequence of adverse political voice if they offer their citizens a fiscal package and policies worse than one obtainable in a neighbor city. Another consideration in the model would be fiscal competition among cities. Cities could use both expenditure and policy to compete with each other for business and citizens' well-being (Case, Hines, and Rosen 1989).

For an obvious possible variable, two cities are neighbors if they share a common border in terms of geographical proximity. On the other hand, based on the voice model, citizens might compare their well-being to those people in cities that are demographically similar. If so, cities with similar racial compositions would view themselves as neighbors.

In addition, in a fiscal competition model, certain types of businesses might prefer high (or low) income states to others. In this case, decision-makers view themselves as competing with other cities with similar income levels. In other words, cities that are similar to them economically or demographically, regardless of geographical proximity.

Once we have selected a criterion for neighborliness, we still face the problem of using it to compute the individual elements of W. This step requires that some assumptions be made. In the case of geographical criterion, one possibility is to make this a dichotomous variable as setting $w_{ij} = 1$ if cities i and j share a common border, $w_{ij} = 0$ otherwise. The other one is to view proximity as a continuous variable. One could define d_{ij} as the distance between the centers of cities i and j, set $w_{ij} = 1/d_{ij}$, and construct w_{ij} from w_{ij} as before. However, in practice, various measures of distance between neighbors yield similar results, as long as the measures are powerful enough to select the sample cites (Case, Hines, and Rosen 1989).

In this model, citizens might compare their well-being to people in cities that are

[2] In this study we constructed weight matrix based on median income and population level as followings. However, this model does not show appropriate goodness of fit for spatial regression analysis, so we consider the model with distance weight matrix (APPENDIX 1, 2).
- Wij = 1/ Inci - Incj / Si where Inci is median income in city I; Si is the sum Σj1/ Inci - Incj .
- Wij = 1/ Popi - Popj / Si where Popi is population in city I; Si is the sum Σj1/ Popi - Popj .

geographically close as neighbor cities. In this case, decision-makers would view themselves as competing with neighbor cities. These considerations suggest that we set up the criteria for neighborliness. We construct W matrices based on city's distance between one city and the other city[3].

Spatial Econometric Issues

Related to spatial econometrics, there are three issues: i) endogeneity of the dependent variable y_i's , ii) possible spatial error dependence, and iii) possible correlation between X_i and the error term.

First, endogeneity of the y_i's is that due to strategic interaction, the y values in different jurisdictions are jointly determined. As a result, the linear combination of the y_i's appearing on the right hand side (RHS) is endogenous and correlated with the error term ε_i.

$$y = \rho Wy + X\beta + \varepsilon \quad (1)$$

where y is the vector of the y_i's, X is the characteristic matrix, and W is the weight matrix, with representative element $\omega_{ij.}$ (Brueckner 2001).

Second, spatial error dependence occurs when the disturbance terms in a regression model show spatial dependence. In that case, the standard assumption of a spherical error covariance matrix failed to hold. In spatial econometrics, these coefficients are associated with a pattern of spatial interaction or spatial structure that is assumed to cause dependence. The most commonly used assumption for the form of spatial dependence is a spatial autoregressive specification.

$y = X\beta + \varepsilon$ this gives, for the error vector ε:

[3] SpaceStat software supports constructing a simple contiguity matrix by using a critical cut-off point. For this, we must compute a distance matrix from X and Y coordinates.

$\varepsilon = \lambda W\varepsilon + \mu$ (2) where λ is a spatial autoregressive coefficient, W is the usual spatial weight matrix, and μ is an error term that satisfies the classical assumptions of independent identical distribution (i.i.d), with constant variance σ^2.

Spatial error dependence arises when ε includes omitted variables that are themselves spatially dependent. When this spatial error dependence is ignored, estimation of (1) can provide false evidence of strategic interaction. To cope with this problem, one approach is to use maximum likelihood to estimate (1), taking account of the error structure in (2) (Anselin, 1988).

Third, with regard to correlation between X_i and ε, if the jurisdiction characteristics in X_i are correlated with the error term, the maximum likelihood estimation is inconsistent. Such correlation could arise because certain jurisdiction characteristics that affect y are unobserved but are correlated with observed characteristics. The problem of correlation between X and ε can be remedied if panel data are available. In this case, all time-invariant community characteristics, observed or unobserved, can be represented by community-specific intercepts, which are estimated using a fixed-effects specification. The estimates of β, which is generated by estimating (1) in first-difference form without the appearance of X, is consistent. While this approach does not work perfectly if some community characteristics are time-dependent and thus not purged by first differencing, most of any correlation between the RHS variables and the error term is likely to be eliminated (Brueckner 2003).

In addition to spatial econometric issues, there are some issues related to specification diagnostics. For this specification diagnostics, there are mainly two tests: Lagrange Mutipliers and Likelihood test. Similar to the situation in the standard regression model, the results of the spatial lag model are subject to a number of assumptions. However, since estimation is based on the maximum likelihood approach, a much narrower range of specification diagnostics is available. Such tests are either Lagrange Multiplier tests or Likelihood Ratio tests. There are all asymptotic and may lead to inconsistent conclusions in finite samples. SpaceStat includes Lagrange Multiplier tests against heteroskedasticity, a Likelihood Ratio test on the spatial autoregressive coefficient ρ, and a Lagrange Multiplier test on remaining spatial error autocorrelation (Anselin, 1988a).

Model Specification

Based on the previous discussion about key variables and estimation procedure, we can test the hypotheses with maximum likelihood estimation of the spatial lag model. Furthermore, we can set up the specific model to estimate the relationship between cities' comprehensive planning expenditure and explanatory variables.

We develop the specific model in the equation (1).

Equation (1):

Per Capita Expenditure$_i$ =

$a_0 + \rho$ Weight Per Capita Expenditure$_i$ + a_1Political/Governmental Institutions$_i$ + a_2Political Economic Demand$_i$ + a_3Municipal Context$_i$ + ε_i ,

Where a_0: constant, ρ : spatial coefficient, *i:* each city, ε: error term.

1) Political/Governmental Institutions: Form of Government, Council Size, Standing Committee

2) Political Economic Demand: Median Income, Home Ownership, Education, Percent of Democrat, Avg. Construction Firm Size, Avg. Real Estate Firm Size

3) Municipal Context: Density, Land Area Change, County Population, County Comprehensive Planning Expenditure, Percent of Unincorporated Population

Variables and Estimation Procedure for Ordered Probit Model

Table 5 reports variable description and predicted coefficient with the dependent variables, zoning request approval and regulatory policy enforcement.

Table 5. Dependent Variable: Zoning Request Approval, Regulatory Policy Enforcement Variable Measurement and Predicted Coefficient

Variable	*Description*	Approval	Enforcement
Political/Governmental Institutions			
Form of Government	Dummy (1=Mayor-Council, 0=Others)	-	+
Council Size	Number of Commission Seats	-	+
Standing Committee	Number of Standing Committee	-	+
Political Economy Demands			
Resident:			
Race (The White)	% of the White	+	+
Income	Median Income	+	+
Homeownership	% of Owner Occupied Household Units	+	+
Education	Percent of High School Graduated	+	+
Partisanship	Percent of Democrat	-	-
Business:			
Builder Interests	Average Construction Firm Size	-	-
Developer Interests	Average Real Estate Firm Size	-	-
Environmental Interests	Land Use Survey (1-5 scale)		+
Municipality Context			
City Growth	% of Population Increase 1990-2000	+	+
Density	Population Per Square Mile in 2000	+	+
Land Area Change	% of Land Change 1990-2000	+	+
County Planning Exp.	Per Capita Comp. Planning Expenditure	+	+
Cities in County	# of Cities	+	+
Unincorporated Population	% of Unincorporated Pop. 2000	+	+

Hypotheses

The following are the hypotheses for the dependent variables, zoning request approval and regulatory enforcement considering Table 5.

Politics/Governmental Institution

H1a: Mayor-Council form of government is likely to have a negative relationship with zoning request approval, but the government form is likely to have a positive relationship with regulatory policy enforcement.

H1b: Cities with large council size are likely to have a negative relationship with zoning request approval but the cities are likely to have a positive relationship with regulatory policy enforcement.

H1c: Cities with a large standing committee are likely to have a negative relationship with zoning request approval but the cities are likely to have a positive relationship with regulatory policy enforcement.

Political Economy Demands

- Diversity of Residents

H2a: Cities with a greater population of whites are expected to have a positive relationship with zoning request approval and regulatory policy enforcement.

H2b: Cities with high personal income are expected to have a positive relationship with zoning request approval and regulatory policy enforcement.

H2c: Cities with high level of homeownership are expected to have a positive relationship with zoning request approval and regulatory policy enforcement.

H2d: Cities with high level of education are expected to have a positive relationship with zoning request approval and regulatory policy enforcement.

H2e: Cities with more Democrats would have a negative impact on zoning request approval and regulatory policy enforcement.

- Business (Interest Group) Demands

H3a: Cities with more real estate development firms are expected to have a negative relationship with zoning request approval and regulatory policy enforcement.
H3b: Cities with more construction firms have a negative relationship with zoning request approval and regulatory policy enforcement.
H3c: Cities with strong environmental interests have a positive relationship with regulatory policy enforcement.

Municipality Context

H4a: Growth rate is positively related to zoning approval and regulatory policy enforcement.
H4b: Density rate is positively related to zoning approval and regulatory policy enforcement.
H4c: Land area change is positively related to zoning approval and regulatory policy enforcement.
H4d: City numbers are positively related to zoning approval and regulatory policy enforcement
H4e: County planning expenditure is positively related to zoning approval and regulatory policy enforcement.
H4f: Unincorporated population is positively related to zoning approval and regulatory policy enforcement.

Estimation Procedure

Table 6 and Table 6-1 are related to implementation of growth management policy. The dependent variables are zoning request approval and regulatory policy enforcement based on the survey questions with 5 scales. Zoning request approval is composed of four sub-questions, and regulatory policy enforcement is made up of 8 sub-questions. For the analysis, we combined the sub-questions in each dependent variable and did reliable test with Cronbach Alpha value (>.70).

Table 6. Descriptive Analysis for Ordered Probit Analysis

Variable	Mean	Std. Dev.	Min	Max
Zoning Request Approval	2.38	1.34	1.00	5.00
Form of Government	0.36	0.48	0.00	1.00
Council Size	5.33	0.86	1.00	9.00
Standing Committee	2.28	5.15	0.00	39.00
Percent of White	77.28	20.96	0.00	100.00
Median Income	39,542.99	20,976.36	0.00	200,000.00
Homeownership	0.20	0.08	0	0.49
Education	77.60	15.32	0.00	100.00
Percent of Democrat	0.49	0.16	0.00	0.94
Construction	9.88	2.91	0.00	14.76
Real Estate	6.40	2.26	0.00	13.44
City Growth	26.33	41.56	0.00	278.10
Density	2,229.49	2,482.51	0.00	20,267.10
Land Area Change	25.12	119.74	0.00	1,941.82
Comp. Expenditure (County)	4.57	3.48	0.00	18.77
No. of City	14.44	11.58	0.00	37.00
Percent of Unincorp. Pop.	1.57	1.95	0.00	7.54

Table 6-1. Descriptive Analysis for Ordered Probit Analysis

Variable	Mean	Std. Dev.	Min	Max
Regulatory Policy Enforcement	3.53	0.93	1.00	5.00
Form of Government	0.36	0.48	0.00	1.00
Council Size	4.05	2.45	0.00	10.00
Standing Committee	2.28	5.00	0.00	39.00
Percent of White	77.30	20.93	0.00	100.00
Median Income	40,318.81	21,685.74	0.00	200,000.00
Homeownership	0.20	0.08	0	0.49
Education	77.87	15.51	0.00	100.00
Percent of Democrat	0.48	0.16	0.00	0.94
Construction	9.96	2.94	0.00	14.76
Real Estate	6.43	2.22	0.00	13.44
Environmental Interests	2.90	1.53	0.00	5.00
City Growth	26.99	42.59	0.00	278.10
Density	2,314.25	2,463.05	0.00	20,267.10
Land Area Change	26.28	125.77	0.00	1,941.82
Comp. Expenditure (County)	4.61	3.54	0.00	18.77
No. of City	14.73	11.65	0.00	37.00
Percent of Unincorp. Pop.	1.62	1.98	0.00	7.54

Ordered Probit Model

As with the binary-outcome model, y* is unobserved and thus can be thought of as the underlying tendency of an observed phenomenon, and we assume that ε follows a certain symmetric distribution with zero mean such as the normal or logistic distribution (Liao 1994).

The central idea is that there is a latent continuous metric underlying the ordinal responses observed by the analyst. Thresholds partition the real line into a series of regions corresponding to the various ordinal categories. The latent continuous variable, y^* is a linear combination of some predictors, **x**, plus a disturbance term that has a standard normal distribution.

$$yi^* = \mathbf{x}i\mathbf{b} + ei,\ ei \sim N(0, 1),\ \forall i = 1, \ldots, N \quad (1).$$

yi, the observed ordinal variable, takes on values 0 through m according to the following scheme:

$$yi = j \leftrightarrow \mu_{j-1} < yi^* < \mu_j,$$

where $j = 0, \ldots, m$, and by slight abuse of notation in the pursuit of completeness I define $\mu_{j-1} = -\infty$, and $\mu_m = +\infty$.

Like the models for binary data, we are concerned with how changes in the predictors translate into the probability of observing a particular ordinal outcome. Consider the probabilities of each ordinal outcome:

$$P[yi = 0] = P[\mu_{-1} < yi^* \leq \mu_0],$$

$$= P[-\infty < yi^* \leq \mu_0],$$

$$= P[yi^* \leq \mu_0],$$

substituting from (1),

$$= P[\mathbf{x}i\mathbf{b} + ei \leq \mu_0],$$

$$= P[ei \leq \mu_0 - \mathbf{x}i\mathbf{b}],$$

$$= \Phi(\mu_0 - \mathbf{x}i\mathbf{b});$$

$$P[yi = 1] = P[\mu_0 < yi^* \leq \mu_1],$$

$$= P[\mu_0 < \mathbf{x}i\mathbf{b} + ei \leq \mu_1],$$

$$= P[\mu_0 - \mathbf{x}i\mathbf{b} < ei \leq \mu_1 - \mathbf{x}i\mathbf{b}],$$

$$= \Phi(\mu_1 - \mathbf{x}i\mathbf{b}) - \Phi(\mu_0 - \mathbf{x}i\mathbf{b}).$$

It is straightforward to see that

$$P[yi = 2] = \Phi(\mu_2 - \mathbf{x}i\mathbf{b}) - \Phi(\mu_1 - \mathbf{x}i\mathbf{b}),$$

and that generically

$$P[yi = j] = \Phi(\mu_j - \mathbf{x}i\mathbf{b}) - \Phi(\mu_{j-1} - \mathbf{x}i\mathbf{b}).$$

For $j = m$ (the ‘‘highest’’ category) the generic form reduces to

$$P[yi = m] = \Phi(\mu_m - \mathbf{x}i\mathbf{b}) - \Phi(\mu_{m-1} - \mathbf{x}i\mathbf{b})$$

$$= 1 - \Phi(\mu_{m-1} - \mathbf{x}i\mathbf{b})$$

yi is observed in M number of ordered categories, and the μ_s are unknown threshold parameters separating the adjacent categories to be estimated with *B*s. To estimate this model we use MLE, and so first we need a log-likelihood function. This is done by defining an indicator variable *Zij*, which equals 1 if $yi = j$ and 0 otherwise. The log-likelihood is simply

$$\ln L = \sum_{i=1}^{N} \sum_{j=0}^{m} \boldsymbol{Z_{ij}} \ln[\Phi_{ij} - \Phi_{ij-1}]$$

where $\Phi_{ij} = \Phi[\mu_j - \mathbf{x}i\mathbf{b}]$ **and** $\Phi_{ij-1} = \Phi[\mu_{j-1} - \mathbf{x}i\mathbf{b}]$**.** (**http://www.stanford.edu/class/polisci203/ordered.pdf**)

Model Specification

Based on the previous discussion about key variables and estimation procedure, we can test the hypotheses using ordered probit model. Furthermore, we can set up the specific model to estimate the relationship between zoning request approval/regulatory policy enforcement and explanatory variables.

We develop the specific model in the equation (2).

Equation (2):

Zoning Request Approval$_i$ (Regulatory Policy Enforcement$_i$) =

a_0 + a_1Political/Governmental Institutions + a_2Political Economic Demand + a_3Municipal Context + $\mathcal{E}$,

Where a_0: Constant, *i:* each city, $\mathcal{E}$: error term, $\forall\, i = 1, \ldots, 5$

1) Political/Governmental Institutions: Form of Government, Council Size, Standing Committee

2) Political Economic Demand: Percent of White, Median Income, Home Ownership, Education, Percent of Democrat, Avg. Construction Firm Size, Avg. Real Estate Firm Size, Environmental Interests

3) Municipal Context: City Growth, Density, Land Area Change, County Comprehensive Planning Expenditure, Number of Cities, Percent of Unincorporated Population

Variables and Estimation Procedure of Probit Model

Table 7. Dependent Variable: Impact Fees, Density Bonus, Performance Zoning, Transfer of Development Right

Variable	*Description*	Impact Fees	Density Bonus	Performance Zoning	Transfer of Development Right
Political/ Governmental Institutions					
Form of Government	Dummy Variable (1=Mayor-Council, 0=Others)	-	-	-	-
Form of Election	Dummy Variable (1=At-large, 0=District)	-	-		
Council Size	Number of Commission Seats	-	-	-	-
Standing Committee	Number of Standing Committee	-	-	-	-
Political Economy Demands					
Resident:					
Race (The White)	% of the White	+	+	+	+
Income	Median Income	+	+	+	+
Homeownership	% of Owner Occupied Household	+	+	+	+
Education	Percent of High School Graduated	+	+	+	+
Partisanship	Percent of Democrat	-	-	-	-
Business:					
Builder Interests	Average Construction Firm Size	-	-	-	-
Developer Interests	Average Real Estate Firm Size	-	-	-	-
Environmental Interest	Land Use Survey (1-5 scale)	+	+	+	+
Municipality Context					
City Growth	% of Population Increase 1990-2000	+	+	+	+
Land Area Change	% of Land Change 1990-2000	+	+	+	+
County Planning Exp.	Per Capita Comp. Planning Expenditure	+	+	+	+
Cities in County	# of Cities	+	+	+	+
Unincorporated Population	% of Unincorporated Pop. (2000)	+	+	+	+

Table 7 includes the four innovative policy programs as the dependent variables: impact fees, density bonus, performance zoning, and transfer of development rights. With these four policy programs, we made a table to describe the variable measurement and predicted coefficients of the variables.

Hypotheses

With the dependent and independent variables in Table 7, we made the following hypotheses.

Politics/Governmental Institution

H1a: Mayor-Council government is likely to have a negative relationship with adoption of market-based growth management policies.

H1b: Cities with at-large election is likely have a negative relationship with adoption of market-based growth management policies.

H1c: Cities with large council size are likely to have a negative relationship with adoption of market-based growth management policies.

H1d: Cities with large standing committee are likely to have a negative relationship with adoption of market-based growth management policies.

Political Economy Demands

- **Diversity of Residents**

H2a: Cities with the more white population are expected to have a positive relationship with adoption of market-based growth management policies.

H2b: Cities with high personal income are expected to have a positive relationship with adoption of market-based growth management policies.

H2c: Cities with high level of homeownership are expected to have a positive relationship with adoption of market-based growth management policies.

H2d: Cities with high level of education are expected to have a positive relationship with adoption of market-based growth management policies.

H2e: Cities with more Democrats would be likely to have a negative relationship with adoption of market-based growth management policies.

- Business (Interest Group) Demands

H3a: Cities with more real estate development firms would have a negative relationship with adoption of market-based growth management policies.

H3b: Cities with more construction firms would have a negative relationship with adoption of market-based growth management policies.

H3c: Cities with strong environmental interests would have a positive relationship with adoption of market-based growth management policies.

Municipality Context

H4a: Growth rate is positively related to adoption of market-based growth management policies.

H4b: Land area change is positively related to adoption of market-based growth management policies.

H4c: City numbers are positively related to adoption of market-based growth management policies.

H4d: County planning expenditure is positively related to adoption of market-based growth management policies.

H4e: Unincorporated population is positively related to adoption of market-based growth management policies.

Estimation Procedure

Table 8. Descriptive Analysis for Probit Analysis

Dependent Variable	Mean	Std. Dev.	Min	Max
Impact Fees	0.48	0.5	0	1
Density Bonus	0.17	0.37	0	1
Performance Zoning	0.07	0.26	0	1
Transfer of Development Right	0.07	0.25	0	1

Independent Variable	Mean	Std. Dev.	Min	Max
Form of Government	0.36	0.48	0.00	1.00
Form of Election	0.75	0.43	0.00	1.00
Council Size	5.33	0.87	1.00	9.00
Standing Committee	2.30	5.21	0.00	39.00
Percent of White	77.11	21.15	0.00	100.00
Median Income	39,641.55	22,193.18	0.00	200,000.00
Home Ownership	0.20	0.08	0	0.49
Education	77.34	15.40	0.00	100.00
Percent of Democrat	0.49	0.16	0.00	0.94
Construction	9.88	2.93	0.00	14.76
Real Estate	6.40	2.28	0.00	13.44
Environmental Interests	3.44	0.97	1.00	5.00
City Growth	25.89	38.25	0.00	278.10
Land Area Change	11.86	44.56	0.00	757.68
Comp. Expenditure (County)	4.54	3.52	0.00	18.77
No. of City	14.25	11.44	0.00	37.00
Percent of Unincorp. Pop.	1.57	1.96	0.00	7.54

As we see in the mean in Table 8, among the four policies, impact fees is the most popular policy (.48) followed by density bonus (.17). For policy adoption analysis, we do probit analysis and have four dependent variables: impact fees, density bonus, performance zoning, and transfer of development right. The four dependent variables are all market-based growth management policies.

Probit Model

The probit model represents statistical model for studying data with binomial distributions. The probit model is defined as

$$\mathbf{Pr(y=1|x) = \Phi(xb)}$$

$$\mathbf{Pr(y=0|x) = 1-\Phi(xb)}$$

where **Φ** is the standard cumulative normal probability distribution and **xb** is called the probit score or index (Liao, 1994).

Since xb has a normal distribution, interpreting probit coefficients requires thinking in the **Z** (normal quantile) metric. The interpretation of a probit coefficient, **b**, is that a one-unit increase in the predictor leads to increasing the probit score by **b** standard deviations. The log-likelihood function for probit is

$$\ln L = \sum \ln \mathbf{\Phi(x_j b)} + \sum \ln \mathbf{[1-\Phi(x_j b)]}$$

(http://www.gseis.ucla.edu/courses/ed231c/notes3/probit1.html).

In the case of probit coefficients, the coefficient is how much difference a unit change in the independent makes in terms of the cumulative normal probability of the dependent variable. This means the probit coefficient measures the effect of the independent variables on the Z scores of the dependent. Note that the probability of the dependent is not a linear function of Z, but rather is a cumulative normal function of Z. This means that the effect of a unit change in the independent on the probability of the dependent depends on the level of the independent variables. Therefore to assess the effect of probit coefficients it is necessary to choose some level of the independents as a *reference* point and in particular the standard reference point is when all independents are at their sample means (http://www2.chass.ncsu.edu/garson/pa765/logit.htm).

Model Specification

Based on the previous discussion about key variables and estimation procedure, we can test the hypotheses using probit model. Furthermore, we can set up the specific model to estimate the relationship between policy adoption of impact fees (IF)/density bonus(DB)/performance zoning(PZ)/transfer of development right (TDR) and explanatory variables.

We develop the specific model in the equation (3).

Equation (3):

Prob(IF/DB/PZ/TDR=1) = Φ(a_0 + a_1Political/Governmental Institutions + a_2Political Economic Demand + a_3Municipal Context),

Where Φ: Standard Cumulative Normal Distribution, a_0: Constant.

1) Political/Governmental Institutions: Form of Government, Form of Election, Council Size, Standing Committee

2) Political Economic Demand: Percent of White, Median Income, Home Ownership, Education, Percent of Democrat, Avg. Construction Firm Size, Avg. Real Estate Firm Size, Environmental Interests

3) Municipal Context: City Growth, Density, Land Area Change, County Comprehensive Planning Expenditure, Number of Cities, Percent of Unincorporated Population

CHAPTER 5

EMPIRICAL ANALYSIS AND FINDINGS

Comprehensive Planning Expenditure

Table 9 presents the result table for spatial regression analysis based on distance weight matrix. After running the spatial regression analysis with the distance weight matrix, weight per capita city expenditure, we conducted three diagnostic tests. For regression diagnostics, we examined heteroskedasticity (Breusch-Pagan test)[4], spatial lag dependence (Likelihood Ratio Test), and spatial error dependence (Lagrange Multiplier Test).

Based on the tests above, there are two important findings with significant independent variables effects. One is that per capita comprehensive planning expenditure is significantly related to distance or neighborhood effect. In other words, one city's planning expenditure is affected by neighborhood city's expenditure. An example of this connection can be seen in Palm Beach County. The three southern-most cities are Boca Raton, Delray Beach, and Boynton Beach. Their per capita planning expenditures differ from one another by no more than about $3.00. Similary, in western Broward County, Parkland and Coral Springs differ greatly in size, but they are adjacent to each other and their per capita planning expenditures differ by only 80 cents (Appendix 3).

The other is that Inverse Mill's Ratio (IMR) is rejected, so we can deal this spatial regression model with 196 cities' comprehensive planning expenditure out of 403 cities. If IMR is significant, we need to get more information about the expenditure by adding more city cases.[5]

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[4] Two statistics for heteroskedasticity are reported in the SpaceStat output for the spatial lag model. One is the Breusch-Pagan test, based on the residuals from the ML stimation, but otherwise identical to the formulation used for the standard regression model. The test statistic and its degrees of freedom are reported, as well as the corresponding probability according to a $\chi 2$ distribution. The proper Lagrange Multiplier test for heteroskedasticity in a spatial lag model includes some adjustments to the Breusch-Pagan framework (Anselin, 1988b).

[5] Instead of using full two-stage Heckman selection, we will proceed the steps to derivation of inverse mills ratio (λ_i). Then, substituting λ_i for Z_i score in the OLS equation, we can test the null hyposthesis, "expenditure report choice and the level of comprehensive planning expenditure are independent each other." The rejection of the null

Table 9. Spatial Regression Analysis with distance weight matrix

Variable	Per Capita Comp. Planning Expenditure	
	Coeff	z-value
Weight Per Capita City Expenditure	0.000019**	2.089907
Form of Government	-9.539440*	-1.653839
Council Size	2.570170	0.612634
Standing Committee	1.556180	0.855243
Median Income	0.000911**	2.126203
Home Ownership	0.000530	0.696164
Education	0.022733	0.163745
Percent of Democrat	162.2070*	1.731393
Avg. Construction Size	-6.140720	-1.369805
Avg. Real Estate Size	1.525920	0.293031
Density	-0.003372	-0.647828
Land Area Change	-0.003497	-0.056263
County Population	-0.000006	-0.204018
Comp. Expenditure	0.588420	0.198480
Percent of Unincorp. Pop.	5.192780	0.712900
IMR	76.8846	1.712354
Constant	-98.13720	-1.001932
N	196	
Log Likelihood	-1213.38	
R2	0.1302	
Sq. Corr.	0.1173	
Diagnostics	Value	Probability
Breusch-Pagan test	0.486444	0.485518
Spatial B-P test	0.486444	0.485518
Likelihood Ratio Test	-3.052323	-1.000000
Lagrange Multiplier Test	0.868916	0.351256

Note: *p<0.1, **p<0.05, ***P<0.01

For supply and demand sides, form of government as supplier and median income and the Democrat as demander are significantly related to comprehensive planning expenditure. Overall, although there is not any significant variable in municipal context, there are three

means that error term of expenditure report choice is correlated with the error term of comprehensive planning expenditure.

significant variables from political/government institutions and political economy demands perspectives: form of government in institutions and median income and percent of Democrat in political economy. According to the results in Table 9, there are four significant explanatory variables: weight for per capita comprehensive expenditure, form of government, median income, and percent of Democrat. The results show that the factors on both the supply and demand sides are critical in determining comprehensive planning expenditures. First of all, the distance weighted variable for comprehensive variable has a positive relationship with per capita city planning expenditure. Therefore, it is proved that distance between neighboring cities measured by weight matrix is an important determinant to affect comprehensive planning expenditure.

In addition, related to supply side, form of government is significantly related to comprehensive planning expenditure. On the other hand, median income and percent of Democrat in political economy demand are significant factors to affect comprehensive planning expenditure. In other words, cities with high levels of median income and the Democrat ratio is likely to have more comprehensive planning expenditure.

For the institutions variable, form of government showed a negative relationship with comprehensive planning expenditure as we expected. Whereas professional managers are more concerned with their careers as managers supporting efficient and budget-wise decisions, elected officials are more interested in furthering their political careers and are more prone to satisfy popular demands in exchange for votes. Considering this point, the negative direction of mayor-council is reasonable and we can understand that the mayor would be there as an anti-growth entrepreneur (Teske and Mintrom 1995). Thus, we can think that mayor-council government is less likely to spend resources on comprehensive planning expenditure.

As we proposed, median income has a positive relationship with the city planning expenditures. However, the direction of the Democrat ratio is opposite to our hypothesis that it would have a negative relationship with comprehensive planning expenditures. We thought that Democrats would not want to spend their money on growth and development related policy programs. On the contrary, they have an interest in spending in comprehensive planning that could control development and growth at the local level, such as, zoning, population caps, and urban service boundary.

Except for the variables above in institutions and political economy demands, there are some important variables in municipal context, although the variables are not statistically

significant. County comprehensive planning expenditure in the municipal context has the same direction as we expected that county expenditure would have a positive relationship with city planning expenditure. We can understand that city governments could have a kind of competitive position with county governments, so they can have high level of expenditures with high level of county expenditures.

As for heteroskedasticity, Table 9 reports heteroskedasticity diagnostics with a Breusch-Pagan test. The Breusch-Pagan (B-P) test reports that there is not any significant problem with heteroskedasty. As we see in Table 9, the B-P test cannot reject the null hypothesis of homoskedascitiy: $H_{0:}\ E[\varepsilon^2_i] = \sigma^2$. Moreover, considering this model places the highest value on spatial effect, diagnostic tests for spatial lag dependence and spatial error dependence are necessary. Through the tests, it is proved that there are not any problems to measure and utilize this spatial regression model.[6] Therefore, based on the statistical diagnostics, we can confirm per capital comprehensive planning expenditure with distance matrix is significant and spatial impact is very important factor to determine the comprehensive planning expenditure in cities.

Implementation of Growth Management Policy

Table 10 and 11 report the estimates for the implementation of growth management policy in terms of zoning request approval and regulatory policy enforcement. The coefficients resulting from the ordered probit estimation is related to the predicted probabilities of implementing zoning request and policy enforcement.

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[6] The Wald (W), Likelihood Ratio (LR), and Lagrange Multiplier (LM) tests are asymptotic approaches based on Maximum likelihood (ML) estimation. The three tests can be considered as different ways of dealing with an omitted variable problem.

H_0: $\lambda = 0$

H_1: $\lambda \neq 0$.

The regression model with a spatially autoregressive error term is a special case of the general spatial process model, with parameters $\rho = 0$ and $\alpha = 0$. The likelihood ratio test is based on the difference between the log likelihood from the spatial autoregressive error model and the loglikelihood from a least-squares regression.

$LR = N.[\ln(\alpha_0^2) - \ln(\alpha_1^2)] + 2\ln.|I - \lambda W| \sim \chi^2(1)$

where α_0^2 is the estimated residual variance for the model under the null (without residual spatial autocorrelation) and α_1^2 is the estimated residual variance for the spatial model. The Lagrange Multiplier test is based on estimation under the null hypothesis only. The results in an easily implemented statistic, derived from OLS residuals and some additional calculations of weight matrix traces. This statistic is of the form:

$LM = (1/T).[e'We/\alpha^2] \sim \chi^2(1)$ where $T = tr\ \{(W + W').W\}$ (Anselin, 1988a).

Table 10. Ordered Probit Analysis- Zoning Request Approval

Variable	Zoning Request Approval	
	Coef.	Std. Err.
Form of Government	0.06340	0.14636
Council Size	0.00096	0.08259
Standing Committee	0.01639	0.01418
Percent of White	-0.00729	0.00450
Median Income	-0.00001*	0.00000
Home Ownership	2.29490*	1.19672
Education	0.00299	0.00745
Percent of Democrat	-1.47708**	0.71386
Construction	-0.01242	0.03636
Real Estate	0.04068	0.04121
Environmental Interests	-	-
City Growth	0.00025	0.00172
Density	0.00017	0.00010
Land Area Change	0.00331	0.00223
Comp. Expenditure (County)	0.04836*	0.02403
No. of City	0.00163	0.00844
Percent of Unincorp. Pop.	-0.06547	0.04866
Prob > chi2	0.0144	
Log likelihood	-351.02724	
Pseudo R2	0.0420	
N	236	

Note: *p<0.1, **p<0.05, ***P<0.01

The results indicated that rather than supply side, demand side variables are more related to zoning request approval. In particular, median income, homeownership and percent of Democrat among the political economy demands are important variables in explaining implementation of growth management policy, zoning request approval. As for the municipal contexts, county comprehensive planning expenditure has a significant impact on zoning request approval.

Although empirical results for median income shows opposite direction to our hypothesis, other significant variables in zoning request approval support our hypotheses regarding homeownership, county comprehensive planning expenditure, and percent of Democrat.

Homeownership and county expenditures are positively associated with implementation of zoning request approval. In other words, cities are more likely to approve the zoning request when the community has more owner occupied housing units and per capita planning expenditure. Since a city with high level of homeownership can frequently face various kinds of zoning requests, there is a high probability to approve the request. In addition, considering the city tends to compete to secure financial resource, they can accommodate citizens' activities related to housing and construction by the zoning requests.

On the other hand, communities with high median income and a large percent of Democratic voters were less likely to approve zoning request. The cities with high level of median income are less likely to approve zoning request since zoning request including variances use and up-zoning tends to promote city growth causing some negative side effects of city growth. As for Democrat, they are more supportive of environmental concerns, social service, and government spending, so they are more interested in status quo without any negative impact on their environmental conditions.

Table 11. Ordered Probit Analysis- Regulatory Policy Enforcement

Variable	Regulatory Policy Enforcement	
	Coef.	Std. Err.
Form of Government	0.10319	0.14038
Council Size	0.00400	0.02961
Standing Committee	0.01548	0.01384
Percent of White	0.00209	0.00374
Median Income	0.00001*	0.00000
Homeownership	0.09119	0.84071
Education	0.01049*	0.00578
Percent of Democrat	-1.14263**	0.47293
Construction	0.00047	0.02822
Real Estate	-0.01933	0.03544
Environmental Interests	0.03422	0.04304
City Growth	-0.00233	0.00157
Density	-0.00007	0.00010
Land Area Change	-0.00112**	0.00051
Comp. Expenditure (County)	-0.00387	0.00794
No. of City	0.05592	0.04272
Percent of Unincorp. Pop.	0.10319	0.14038
Prob > chi2	0.0000	
Log likelihood	-320.75184	
Pseudo R2	0.0697	
N	292	

Note: *p<0.1, **p<0.05, ***P<0.01

Similar to the previous analysis findings for zoning request approval, regulatory enforcement was influenced by political economy demands and municipal context rather than supply side. In political economy demands, median income, education, and percent of Democrat are significant variables on the demand side. In addition, land area change is significant in the municipal context. In this analysis, the results supported our hypotheses of median income, education, and percent of Democrat. However, land area change showed different direction to our hypothesis that land change would have positive impact on regulatory policy enforcement. We can accept that the cities with a high level of median income and education are more likely to enforce strict regulatory policy. Regulatory policy enforcement is closely concerned with growth control perspective, so it is not surprising that the educated and high level of income people prefer the city's sustained management to development. Because people with high education and

income levels have more chance to own their own house with the stable income sources, they often prefer strict growth management policy, seeking to live in a quiet and peaceful community.

In the meantime, percent of Democrat and land area change shows negative impact on regulatory policy enforcement. Democratic voters do not support strict regulatory policy enforcement as they did in the previous approval request analysis. They could be interested in city government's strict regulatory policy enforcement in terms of their environmental concerns, but on the basis of this result we conjecture that they might have much more preference over other social services and programs or civic environmental groups' own regulation. With regard to land area change, cities with experiencing their land area decrease by land development are not willing to implement pro-growth policy. Rather, the cities would prefer to implement strict regulatory policy, so this negative result with land area change is reasonable and understandable.

Innovative Growth Management Policy Adoption

Tables 12-15 report the estimates for the adoption of four innovative growth management policy programs: impact fees, density bonus, performance zoning, and transfer of development rights. The coefficients of these estimations indicate the predicted probabilities of adopting the four policy programs described above. Based on these results, we found that different factors affect adoption of each growth management policy program.

Table 12. Probit Analysis- Impact Fees

Variable	Impact Fees	
	Coefficient	Standard Error
Form of Government	-0.17322	0.21824
Form of Election	-0.32887	0.23485
Council Size	0.12940	0.12014
Standing Committee	0.03174	0.02264
Percent of White	0.00642	0.00640
Median Income	-0.00002**	0.00001
Home Ownership	0.06116	1.66608
Education	0.01241	0.01231
Percent of Democrat	-1.72338*	1.00258
Construction	0.00699	0.05088
Real Estate	-0.08816	0.05430
Environmental Interests	0.14885	0.10338
City Growth	0.00527**	0.00266
Land Area Change	-0.00007	0.00302
Comp. Expenditure (County)	0.05434	0.03403
No. of City	0.00842	0.01082
Percent of Unincorp. Pop.	0.16130**	0.07073
constant	-1.16154	1.40972
Prob > chi2	0.0016	
Log likelihood	-114.17284	
Pseudo R2	0.1467	
N	195	

Note: *p<0.1, **p<0.05, ***P<0.01, Standard Error listed in the parentheses.

The findings above show that political economy demands and municipal context are much more important to the adoption of impact fees than political/government institutions as suppliers. First of all, adoption of impact fees is associated with the four factors: median income, percent of Democrat, city growth, and unincorporated population. Median income and home ownership are related to political economy demands and city growth and unincorporated populations are to municipal context.

As we expected, city growth and unincorporated population show positive relationships, but median income and percent of Democrat show negative relationships with impact fees. The evidence indicates that the cities with high level of city growth and unincorporated population are more likely to adopt impact fees as the growth management policy program. However, median income and percent of Democrat are negatively related to adoption of impact fees in the

city. This result derives from the reason that cities favor strict policy implementation through exclusionary zoning and other land use policies to increase their revenue by inducing citizens or taxpayers with high personal incomes into their cities. In this situation, cities with high level of median income are less likely to adopt impact fees since it tends to promote city growth causing some negative side effects of city growth. Percent of Democrat shows a negative relationship with impact fees adoption as it did for previous policy implementation analysis related to zoning request approval and regulatory policy enforcement. Thus, we can understand that Democratic communities do not support one growth management policy program, impact fees.

Meanwhile, although they did not statistically support our hypotheses with the given significance level, there are some variables we need to pay attention to: real estate and environmental interests variables. It is interesting to see that real estate as development supporter has opposite direction to environmental interests as environmentalists. The variable for real estate showed a negative relationship with adoption of impact fees, but the variable of environmental interests had a positive relationship with impact fees. It suggests that both parties have conflicting interests and direction in impact fees and growth management in general.

Table 13. Probit Analysis-Density Bonus

Variable	Density Bonus	
	Coefficient	Standard Error
Form of Government	-0.563387**	0.277292
Form of Election	-0.017668	0.268281
Council Size	0.266205*	0.139540
Standing Committee	-0.007016	0.021231
Percent of White	0.006592	0.007563
Median Income	-0.000005	0.000009
Homeownership	-2.688778	1.956351
Education	-0.009598	0.011157
Percent of Democrat	-5.247205***	1.784208
Construction	0.087582	0.068680
Real Estate	-0.000742	0.074051
Environmental Interests	-0.110911	0.127785
City Growth	-0.002787	0.003569
Land Area Change	0.001009	0.003494
Comp. Expenditure (County)	-0.020147	0.045487
No. of City	0.026465**	0.012876
Percent of Unincorp. Pop.	-0.117094	0.078485
constant	0.521133	1.667835
Prob > chi2	0.0083	
Log likelihood	-79.153688	
Pseudo R2	0.1770	
N	195	

Note: *p<0.1, **p<0.05, ***P<0.01

As for density bonus, all three aspects of institution, political economy and municipal context are intertwined with the adoption of density bonus. In terms of supply and demand, form of government and council size as supply side variables are important and the percent of Democrat in demand side is significant in predicting adoption of density bonus. In municipal context, number of city in a county is significantly related to density bonus adoption.

In detail, four important factors that explain adoption of density bonus: form of government, council size, the Democratic population, and number of cities. The results support our hypotheses. Mayors as elected officials are more interested in furthering their political careers and are more prone to satisfy popular demands in exchange for votes. Therefore, mayor-council government gives a priority on the conservative growth management policies rather than innovative progrowth policies like density bonus. However, another institutional variable,

council size shows the opposite direction to our hypothesis that large number of council would have negative relationship with density bonus adoption. We found that council size is positively related to adopt density bonus policy.

Meanwhile, the Democrat population had a negative impact on adoption of density bonus that was the same impact of impact fees adoption. Cities with a higher population of the Democrats are negatively associated with adopting density bonus. This means that Democrats do not support adopting density bonus and may not want to spend expenditure on growth management policy. On the other hand, cities with more neighboring cities in its county are more likely to adopt density bonus. As we see through tax competition between neighboring cities, in terms of competition, city government as the supplier cannot help considering the neighboring cities and providing progrowth policy program in the form of density bonus.

Table 14. Probit Analysis-Performance Zoning

Variable	Performance Zoning	
	Coefficient	Standard Error
Form of Government	0.252861	0.355016
Form of Election	-	-
Council Size	0.252066*	0.149522
Standing Committee	0.046875**	0.023467
Percent of White	-0.008163	0.008428
Median Income	0.000001	0.000013
Home Ownership	-5.587144**	2.635444
Education	0.013708	0.015857
Percent of Democrat	-3.211766	2.201100
Construction	0.140492	0.089867
Real Estate	-0.063574	0.103052
Environmental Interests	0.054344	0.170021
City Growth	-0.007152	0.008336
Land Area Change	-0.014911	0.012998
Comp. Expenditure (County)	-0.006991	0.054834
No. of City	-0.018685	0.017575
Percent of Unincorp. Pop.	-0.028891	0.099627
constant	-1.671305	2.157759
Prob > chi2	0.0101	
Log likelihood	-44.613375	
Pseudo R2	0.2638	
N	201	

Note: *p<0.1, **p<0.05, ***P<0.01

For performance zoning, both supply and demand sides have a significant relationship with adopting performance zoning. In terms of supply side, council size and standing committee are positively related to performance zoning adoption, and homeownership variable in political economy demand is negatively related to adoption of performance zoning.

Based on these findings, council size, standing committee, and homeownership are significantly associated with adoption of performance zoning. The results are different from the negative relationship we expected. While both council size and standing committee show positive relationships, homeownership shows negative relationship with adoption of performance zoning. We anticipated that council size and standing committees contribute to procedural complexity by increasing the number of actors involved in policy making. Large number of council and participation of standing committees imply that there are additional steps in the policy process. Thus, we assumed that the number of council and standing committees will be negatively related to adoption of performance zoning. In spite of procedural complexity by council members and standing committees, performance zoning is very attractive and advantageous to cities with a large number of council members and standing committees because performance zoning would improve the planning system by streamlining the development process, increasing certainty over development permissions and approvals, and reducing the costs of negotiating with local planners. Also, the performance zoning is negatively related to homeownership since the homeowners oppose urban sprawl by development and prefer to enjoy their quality of life.

Table 15. Probit Analysis-Transfer of Development Rights

Variable	Transfer of Development Rights	
	Coefficient	Standard Error
Form of Government	-0.47906	0.43169
Form of Election	-	-
Council Size	-0.06204	0.18911
Standing Committee	-0.02921	0.03909
Percent of White	0.02474	0.02020
Median Income	-0.00008**	0.00003
Homeownership	6.98710**	2.98924
Education	0.04199	0.04162
Percent of Democrat	-10.37126**	3.87238
Construction	0.15785	0.10006
Real Estate	0.01654	0.11319
Environmental Interests	0.00076	0.19387
City Growth	-0.00632	0.00822
Land Area Change	-0.00516	0.01140
Comp. Expenditure (County)	0.11026*	0.05902
No. of City	0.00994	0.02442
Percent of Unincorp. Pop.	0.25885*	0.14165
constant	-3.32807	3.28954
Prob > chi2	0.0085	
Log likelihood	-34.524724	
Pseudo R2	0.3204	
N	201	

Note: *p<0.1, **p<0.05, ***P<0.01

The results of Transfer of Development Right (TDR) point out that political economy demands and municipal context are more important than political/government institutions. This finding emphasizes the variables from the demander's side, such as median income, homeownership, and the Democrat population. In the case of municipal context, county planning expenditure and unincorporated population are significant to adoption of TDR.

On the one hand, adoption of transfer of development rights is affected by the following factors: median income, homeownership, the Democrat population, county planning expenditure, and unincorporated population. Median income is negative impact opposite to our hypothesis, but the other factors are same as the expectations. The cities with high level of median income do not want to have higher density by TDR. The most common TDR program allows the landowner to sell the development rights to a developer who then uses those development rights to increase

the density of houses on another piece of property at another location. Thus, cities are less likely to adopt TDR because it is a policy program to promote growth rather than control the city growth.

On the other hand, it is proved that the cities with high level of housing ownership are more likely to adopt transfer of development rights because by adopting TDR, they may obtain the property rights as well as buy the development rights to build a house or construct a building with high density. In addition, in the case of the Democrat population, it is significant and has a negative relationship with TDR adoption as we expected. Therefore, the cities with high level of the Democrat population are less likely to adopt transfer of development rights.

Finally, county influence is critical in that county planning expenditure and unincorporated population positively affect TDR adoption. Since TDR promotes development in urban areas by purchasing property development right in rural preservation area, it is attractive to the county with large size of land area. Therefore, cities with high level of county planning expenditure and unincorporated population allow the taxpayers to exercise their property rights through transfer of development rights.

Implications

We attempted to analyze the findings in terms of supply and demand as well as institutions, political economy demands, and municipal context perspective. Through the findings, we found out that demand sides have the most significant impact on implementation and adoption of growth management policy program. In addition, among the three perspectives, the political economy perspective is the most important and municipal context is second, followed by institutions. Whereas implementation of GM is more closely related to variables of political economy demands, adoption of GM is more associated with political/governmental institutions including council size and standing committee compared to implementation of GM.

Specifically speaking, as for supply side, form of government, council size, and standing committee variables are important factors. On the demand side, median income, homeownership, education, and percent of Democrat are significant factors. In addition to supply and demand sides, there are important factors related to municipal context: city growth, land area change,

county comprehensive planning expenditure, number of cities in county, and percent of unincorporated population.

On the whole, median income, homeownership, and percent of Democrat showed consistent direction and significant relationship with implementation and adoption of the innovative policies over more than three analyses. First of all, median income consistently showed a negative relationship with zoning request approval, impact fees, and TDR except comprehensive planning expenditure and regulatory policy enforcement. This indicates that cities with high level of income have not much interest in implementing and adopting growth management policy program, in particular, impact fees and TDR. Secondly, homeownership also has a consistent and positive relationship with zoning request approval and transfer of development rights, but has a negative relationship with performance zoning. We can understand that homeownership is the important factor to implement zoning request approval as well as to adopt TDR. Therefore, the cities with high level of homeownership are more likely to approve zoning request and have TDR policy program.

Moreover, there is a very special finding about the percent of Democrat in this study. Except performance zoning, the Democrat variable always showed the significant relationship with implementation and adoption of growth management policy. We found that the percent of the Democrat population negatively affects overall growth management policy including zoning request approval, regulatory policy enforcement, impact fees, density bonus, and TDR. It is an unique result that party ideology has a significant impact on implementation and adoption of growth management policy. Based on this finding, we concluded that cities with high percent of Democrats tend to reject growth management. Thus, we can assert that more liberal communities and governments dominated by the Democrat have negative impact on implementation and adoption of growth management policies.

Finally, in terms of pro and anti-growth, there are very distinct results to compare each side. The directions between pro and anit-growth related variables are clearly opposite, so we can assure what their positions are for the growth management policy programs. Progrowth variables (construction and real estate) in contrast with antigrowth variable (environmental interests) show the opposite impact on the policy adoption although both variables do not show significant results. In regulatory policy enforcement, for example, the developer as progrowth business (interest) group does not support regulatory policy enforcement, but environmental

interests as antigrowth support it. The same result applies to impact fees and performance zoning. Meanwhile, the situation for density bonus is reversed compared to implementation of regulatory policy. Therefore, this finding points out that there is variation of policy implementation and adoption between pro and antigrowth side depending upon GM policy.

CHAPTER 6

CONCLUSION

This study originated from the following two questions: to what extent do city governments engage in policy actions to restrict development and manage growth; and how do local political institutions shape the restrictiveness of local growth management?

To answer these questions, this dissertation first identified variations in the exercise of growth management powers across cities based on financial data gathered from fiscal reports filed with the Florida Comptroller, and policy implementation/adoption data gathered in a mail survey conducted by the author in collaboration with Richard Feiock and Antonio Tavares. In addition, information on city level political institutions and governing structures was gathered from the International City Management Association's (ICMA) 2001 Form of Government Survey.

We believe, in some degree, that this research contributed to public policy and local governance. Based on information about growth management expenditure and policy adoption/implementation, this study examined a broad set of government institutions extended to include the size and organization of city councils and standing committees. This research focused on the implementation and exercise of discretionary powers as well as policy adoption in relation to growth management based on a political market approach. Under the political market approach, focusing on the demander and supplier help us understand internal forces of growth management policy. Finally, in acknowledging that the underlying theory of institutions in this work is applicable to cities, this study attempted to identify cities' spatial impact on expenditure for growth management. Referring to policy diffusion theory, we reviewed the impact of neighboring cites' on comprehensive planning expenditure as identifying the internal and external forces by use of political market and spatial effect model.

In developing a theoretical framework, we considered Peterson's policy typologies in the relationships between public policy and political processes. First, citizen participation and group

formation are affected only insofar as the economic consequences of a policy are recognized by policymakers. Second, any particular proposal on a civic agenda may have elements within it that are developmental, others that are redistributive, and others that are purely allocational. Related to development policy choices, there are two perspectives: all cities have a unitary interest in promoting development, or all cities have various interests depending upon the constituencies and political incentives of local elected officials. In relation to policy implementation, following the second perspective, research interests focused on the extent of the impact of institutions to cities' implementation of development policy. This issue is critical for the efficiency and the distributive consequences of development policy implementation.

In keeping with Peterson's development policy, government institutions cover much of the theoretical framework of this dissertation. Douglas North supported the primary of institutions and defined them as "the rule of game in a society or, more formally, the humanly devised constraints that shape human interaction." Most importantly, the perception of institutions as constraints implies that institutions as rules can prescribe a series of action related to organizational performance and social change.

This study also attempted to combine politics and institutions into the political market framework in that municipalities are political systems in which problems of aggregation and representation must be factored into the process by which local bundles of goods and services are set. This process has been described as a political market. In the political market the supply and demand forces play an important role to drive institutional changes. This implies that institutional change is the result of a political process or contract between demanders and suppliers in the political market framework. From the perspective of demanders, the primary interest of a political market is on economic incentives and benefits of citizens/the interest group. In terms of suppliers, on the other hand, the political market incorporates the role of government actors as the suppliers and expands understanding of political benefits and processes.

However, this political market approach does not place much value on the ability of government to act independently of the push-pull forces of either growth machine or antigrowth coalition. Moreover, it is politically rational to suggest that the consensus of the community be determined by elected and administrative officials. Namely, government's ability to act as an independent yet responsive actor depends on its ability to set up policy responses considering urban conditions and growth goals. Agenda-setting of growth management issues is the

challenging task for all governments, including local, regional, and state to do.

Balanced between the political market and government influence, we identified three prime participants as local community actors: public officials, city residents, and local business organizations. In general, public officials approach local politics by considering rewards for winning election, or in the case of re-elected officials, influence local market politics by bureaucratic decision rules and local service delivery. For residents, there would be issues to consider the residents' homeownership and income level. As for the local business organizations, their participation in local politics is shaped by the costs and benefits of these actors. They are interested in minimizing their costs and maximizing their profits. In this political market approach, we attempted to classify these three participants into supplier and demander. In this study, we see public officials (government) as suppliers and residents & business (interests) organizations as demanders.

Since this study focuses on Florida cities as a unit of analysis, it is very important to review the background of growth and development in Florida. Historically, many Florida communities have faced challenges related to growth and development. Growth and development created opportunities for communities to expand their revenue base, develop new programs, and enhance their regional political influence. At the same time, growth and development resulted in political challenges as, many argue, they may threaten environmental resources and the quality of life in the community as well as altered the distribution of power and wealth within the community. In this way, cities in Florida have confronted these new opportunities and challenges in varying ways. Faced with this opportunities and challenges, state government enacted Florida's Growth Management Act (GMA) in 1985. While this legislation created a top-down approach to the implementation of growth management through a mandatory comprehensive planning process, it has left considerable room for policy innovation at the local level because local governments are able to create growth management policies within a broad state mandated context.

Based on the theoretical framework above, we surveyed city planners in Florida to gather data about land use management related to implementation and adoption of growth management policy. Through the survey, we found that Florida cities use several innovative land use policy instruments. Among many innovative land use policies in Florida, this study examined impact fees, density bonuses, transfer of development rights, and performance zoning.

As we study how the innovative growth management policies were adopted, in practice, it is necessary to review how well the innovative policies are implemented in the jurisdictions. In general, implementation of policy can be seen and understood through different angles. Thus, policy implementation covers extensive interests and perspectives concerned with the purpose or goal of policy, the performance of the policy, and outcomes or effects of the policy. In this research, the following are emphasized core parts as concerned with implementation of growth management policy: local comprehensive planning expenditures, zoning request approval, and policy enforcement on the innovative policies.

The empirical analysis enables us to evaluate real growth management policy practice. The analysis enhances our understanding of how Florida cities deal with the dual pressures of competing for economic development and at the same time managing population growth. In the research design, we considered the role of local institutions as the supplier, political economy demands, and municipal context. In the role of local institutions, we saw the form of government, system of election, councils, and standing committees on the supplier side. Furthermore, we examined these four institutions in terms of institutional arrangements and complexity. In terms of political economy demands, demanders in a local market have different incentives and interests because the local market for public goods is also driven by a political economy linking the structure of local government to decisions about service and tax bundles. We explored the interests of demanders whose actions drive the local market, assessed the degree to which their interests are homogeneous and identified the source of conflict between them. We see the demanders' preferences and interests considering diversity of residents, political ideology, and business demand. Municipal context is closely related to internal and external factors of municipalities. While the internal factors would be growth, land change, and population in municipality, the external factors are associated with county level factors, such as county planning expenditure, cities in county, and unincorporated population. On the whole, we examined two factors: growth pattern as the internal variables and county influence as the external variables.

We tested specific hypotheses derived from institutions, political economy, and municipal contexts to prove our propositions on comprehensive planning expenditure and implementation/adoption of growth management policy. The first dependent variable is per capita expenditures for comprehensive planning using financial data. The variable was analyzed

using spatial regression analysis. This empirical analysis supported the hypothesis. Per capita comprehensive planning expenditure is significantly related to distance or neighborhood effect. The distance weighted variable for comprehensive variable has a positive relationship with per capita city planning expenditure, so distance between neighboring cities measured by weight matrix is an important determinant to affect comprehensive planning expenditure. In addition, with regard to political market approach, the factors in both supply and demand side are critical in determining comprehensive planning expenditure. Overall, although there is not any significant variable in municipal context, there are three significant variables from political/government institutions and political economy demands perspective. The second dependent variable is zoning request approval and regulatory policy enforcement. We estimated the implementation of growth management policy in terms of zoning request approval and regulatory policy enforcement by employing ordered probit analysis. The results indicate that demand side variables, as opposed to supply side variables, are more closely related to zoning request approval. Empirical results for zoning request approval supported the research hypotheses: median income, homeownership, county comprehensive planning expenditure, and percent of Democrat. Thus, we can understand political economy demands and municipal contexts are significantly associated with zoning request approval rather than government/institutions perspectives. Similar to the findings of zoning request approval, regulatory enforcement was influenced by demand sides rather than supply side. In the case of regulatory policy enforcement, the results revealed four significant variables: median income, education, percent of Democrat, and land area change. Based on this result, we found that political economy demands and municipal context are equally important in regulatory policy enforcement.

On the other hand, we estimated the adoption of four innovative growth management policy programs by employing a probit model: impact fees, density bonus, performance zoning, and transfer of development rights. As the result of the probit analysis, we found there are different factors that affect adopting policy in each growth management policy program. Adoption of impact fees is associated with four factors: median income, percent of Democrat, city growth, and unincorporated population. As for density bonus, there are four important factors: form of government, council size, the Democrat population, and number of city. With regard to performance zoning, three factors, such as council size, standing committee, and

homeownership, are significantly associated with adoption of performance zoning. The final innovative policy adoption for transfer of development rights is affected by the following four factors: median income, homeownership, the Democrat population, county planning expenditure, and unincorporated population.

Finally, through empirical analysis, we reached some conclusions as followings. First, we found that demand sides have more impact on implementation and adoption of growth management policy program. In addition, among the three perspectives above, the political economy perspective are the most important and the municipal context is second, followed by institutions. With the findings, we understand that demands from residents and interest groups are pivotal in implementing and adopting growth management policy.

Second, we need to pay close attention to the following factors; median income, homeownership, and percent of Democrat. These factors showed consistent direction and significant relationship with implementation and adoption of the innovative policies over the empirical analyses. Median income consistently showed a negative relationship with zoning request approval, impact fees, and TDR except comprehensive planning expenditure and regulatory policy enforcement. In the case of homeownership, it has a consistent and positive relationship with zoning request approval and transfer of development rights but negative relationship with performance zoning. In addition, there is a very unique finding about the percent of Democrat in this study. Except performance zoning, the Democrat variable always showed the significant relationship with implementation and adoption of growth management policy. We found that the percent of the Democrat population negatively affects overall growth management policy including zoning request approval, regulatory policy enforcement, impact fees, density bonus, and TDR. A unique result was that party ideology has a significant impact on implementation and adoption of growth management policy. Based on this finding, we concluded that cities with a high percent of Democrats tend to oppose growth management policy.

Third, in terms of pro and anti-growth, the findings present distinct results to contrast each side. Pro-growth variables (construction and real estate) in contrast with anti-growth variables (environmental interests) showed opposite impact on the policy adoption although both variables do not show significant results. In regulatory policy enforcement, for example, the developer as pro-growth business (interest) group does not support regulatory policy

enforcement, but environmental interests as antigrowth support it. The same result applies to impact fees and performance zoning. This directions between pro and anit-growth related variables are clearly opposite, so we can assure what their positions are for the growth management policy programs.

Limitations and Future Study

First, there was some limitations in gathering a kind of soft statistical data for political and governmental institutions, such as, referenda/initiative/recall, veto power, mayor tenure, etc. We made an effort to get information about the institutions above through survey and web search, but we just collected less than 50 % of all the cities in Florida.

Second, we had difficulty in obtaining all the comprehensive planning expenditure in Florida cities. All the cities are supposed to report comprehensive planning expenditure to state government (Department of Financial Services), but there are only 196 cities reported. One official in DFS told us that if comprehensive planning expenditure was included in some other account, it is not possible to pull out the comprehensive planning expenditure in other growth management-related expenditure items.

Third, using spatial econometrics for spatial regression analysis is still in the experimental application stage in Public Administration academia, so this study employed basic level of spatial analysis with simple distance weight matrix. In constructing weight matrix, there are various approaches including arc distance, binary weight, inverse distance weight matrix. In addition to distance weight matrix, there are different ways to measure neighboring effect, such as, income, population, and race.

Fourth, with regard to policy adoption, we applied same perspectives to all the four GM policy programs even though each policy program has its own characteristics and background. If we study each policy separately, we would capture more specific and deeper impacts on the policy adoption.

For the future study, this study just focused on the innovative market-based approach, but it is recommendable to do a comparative study between growth management and growth control policy programs. There is likely to be much difference between them in terms of influential

factors to affect expenditure, adoption, and implementation of GM.

Moreover, it will be necessary to examine a broader set of government institutions. Although this study attempted to cover the various government institutions, there will be many important variables to take into consideration, such as, provisions for direct democracy, the administrative location of development functions, and the powers of the mayor.

APPENDIX A. Spatial Regression Analysis with Population Weight Matrix

Variable	Per Capita Comp. Planning Expenditure	
	Coeff	z-value
Weight Per Capita City Expenditure	-0.0698773	-0.52209
Form of Government	-9.91105	-1.72634
Council Size	4.07676	0.995867
Standing Committee	2.21426	1.253081
Median Income	0.000922501	2.158772
Home Ownership	0.000733986	0.980164
Education	0.0456704	0.332237
Percent of Democrat	180.39	1.931142
Avg. Real Estate Size	-0.405614	-0.0805
Density	-0.00309174	-0.59562
Land Area Change	-0.00282761	-0.04562
County Population	-1.63E-52	-0.61489
Comp. Expenditure	1.39E+00	0.475176
Per Unincorp. Pop.	6.64065	0.924343
IMR	110.677	2.799727
Constant	-166.647	-2.15447
N	196	
Log Likelihood	-1212.62	
R2	0.1203	
Sq. Corr.	0.1214	
Diagnostics	Value	Probability
Breusch-Pagan test	1194.758130	0.000000
Spatial B-P test	1194.772211	0.000000
Likelihood Ratio Test	0.387982	0.533362
Lagrange Multiplier Test	0.011678	0.913946

APPENDIX B. Spatial Regression Analysis with Income Weight Matrix

Variable	Per Capita Comp. Planning Expenditure	
	Coeff	z-value
Weight Per Capita City Expenditure	-0.0794403	-0.53635
Form of Government	-9.57643	-1.67192
Council Size	3.25365	0.78381
Standing Committee	1.66988	0.92465
Median Income	0.000917589	2.18623
Home Ownership	0.000553096	0.73509
Education	0.0252099	0.18295
Percent of Democrat	164.703	1.80623
Avg. Real Estate Size	-6.46483	-1.51369
Density	1.27861	0.25036
Land Area Change	-0.00364503	-0.83409
Comp. Expenditure	-2.09E-03	-0.03405
Per Unincorp. Pop.	4.60E-01	0.15666
IMR	4.03091	0.7169
Constant	81.2571	1.82437
N	196	
Log Likelihood	-1211.77	
R2	0.1279	
Sq. Corr.	0.1291	
Diagnostics	Value	Probability
Breusch-Pagan test	1192.280210	0.000000
Spatial B-P test	1192.287626	0.000000
Likelihood Ratio Test	0.212654	0.644695
Lagrange Multiplier Test	0.028978	0.864831

APPENDIX C. Index of Florida Cities

*A: Per capita Planning Expenditure, B: Homeownership (%), C: Population (2000)
D: Income (Median), E: Form of government, F: Density

Cities	A	B	C	D	E	F
Altamonte Springs	56.12	0.14	41,200	41,578	0 (Council-Manager)	4,631
Apopka	25.94	0.24	26,642	43,651	1(Mayor-Council)	1,108
Arcadia	1.66	0.2	6,604	25,025	0	1,636
Archer	0.66	0.49	1,289	27,857	0	543
Atlantic Beach	9.83	0.24	13,368	48,353	0	3,584
Avon Park	183.46	0.19	8,542	23,576	1	1,842
Baldwin	2.42	0.19	1,634	28,603	1	767
Bay Harbor Islands	20.35	0.06	5,146	38,514	0	13,875
Belleview	4.25	0.23	3,478	26,250	0	1,906
Boca Raton	13.13	0.22	74,764	60,248	1	2,750
Bonita Springs	0.23	0.21	32,797	46,603	0	929
Boynton Beach	11.36	0.23	60,389	39,845	0	3,804
Bradenton Beach	114.97	0.13	1,482	32,318	1	2,705
Brooksville	25.05	0.16	7,264	25,489	0	1,470
Callaway	22.23	0.2	14,305	36,064	1	2,504
Cape Canaveral	10.88	0.11	8,829	30,858	0	3,788
Cape Coral	3.82	0.28	102,286	43,410	0	972
Casselberry	34.55	0.2	22,629	38,627	0	3,397
Cedar Key	58.62	0.31	790	32,232	1	865
Chiefland	7.24	0.16	1,993	17,331	0	510
Claerwater	8.31	0.18	108,787	36,494	0	4,302
Clermont	29.36	0.28	9,414	39,290	0	890
Cocoa	53.19	0.2	16,406	27,062	0	2,200
Cocoa Beach	20.32	0.18	12,462	42,372	0	2,552
Coconut Creek	17.84	0.16	43,566	43,980	0	3,773
Coleman	26.63	0.22	647	25,500		445
Cooper City	11.20	0.29	27,939	75,166	0	4,402
Coral Gables	72.44	0.22	42,249	66,839	1	3,217
Coral Springs	12.41	0.18	117,549	58,459	0	4,917
Crestview	19.36	0.22	14,820	33,122	1	1,154
Dade City	21.63	0.19	6,188	27,115	0	1,885
Dania Beach	68.26	0.16	20,061	34,125	0	3,294
DeBary	12.81	0.3	15,600	43,364	0	854
Deerfield Beach	6.58	0.16	64,583	34,041	0	4,811
Deland	10.98	0.18	20,904	28,712	1	1,317
Delray Beach	14.53	0.19	60,020	43,371	0	3,906
Deltona	8.45	0.3	69,543	39,736	0	1,944
Destin	47.54	0.27	11,203	53,042	0	1,477
Dunedin	26.53	0.25	35,691	34,813	1	3,438
Dunnellon	21.70	0.26	1,898	27,386	0	269
Ebro	8.00	0.12	250	28,750	1	79
Edgewater	11.60	0.29	18,668	35,852	0	1,873
Edgewood	4.36	0.28	1,901	56,528	1	1,566
El Portal	9.67	0.24	2,505	39,681	0	5,897
Eustis	22.16	0.24	15,357	32,032	0	1,808
Everglades City	33.90	0.21	479	36,667	0	513

Fanning Springs	6.42	0.08	737	17,857	1	207
Florida City	1.43	0.13	7,843	14,923	1	2,436
Fort Lauderdale	6.88	0.15	152,397	37,887	0	4,803
Fort Meade	10.24	0.2	5,691	32,984	0	1,144
Fort Myers	12.13	0.12	48,208	28,514	1	1,515
Fort Myers Beach	19.81	0.19	6,561	48,045	0	2,291
Fort Pierce	18.81	0.13	37,516	25,121	0	2,545
Frostproof	2.68	0.21	2,975	30,412	1	1,197
Gainesville	13.93	0.17	95,447	28,164	0	1,981
Greenville	279.91	0.16	837	20,060	0	637
Gulf Breeze	13.55	0.31	5,665	52,522	0	1,192
Haines City	8.87	0.17	13,203	27,636	0	1,589
Hallandale Beach	10.44	0.07	34,282	28,266	0	8,143
Hawthorne	5.43	0.26	1,415	26,008	0	442
Hialeah	7.47	0.12	230,972	29,492	1	11,767
Hialeah Gardens	1.64	0.14	19,322	38,858	0	7,846
High Springs	1.56	0.26	3,863	34,354	0	209
Highland Park	16.39	0.18	244	41,875	0	544
Hilliard	3.30	0.13	2,702	34,531	1	492
Hollywood	13.39	0.19	139,357	36,714	1	5,097
Homestead	20.16	0.09	31,909	26,775	0	2,234
Hypoluxo	1.49	0.14	2,015	50,284	0	3,389
Indialantic	1.30	0.3	2,944	62,181	0	2,841
Indian River Shores	88.86	0.34	3,448	110,729	0	666
Inglis	12.49	0.17	1,491	24,432	1	408
Inverness	31.71	0.25	6,789	26,604	1	932
Islamorada	132.44	0.24	6,846	41,522	0	963
Jacksonville	10.17	0.21	735,617	40,316	0	971
Jacksonville Beach	12.58	0.23	20,990	46,922	0	2,732
Jasper	0.69	0.2	1,780	19,018	0	911
Jennings	4.86	0.12	833	25,714	0	461
Juno Beach	70.17	0.13	3,262	55,263	0	2,339
Jupiter	31.70	0.26	39,328	54,945	0	1,967
Jupiter Island	428.20	0.37	620	200,000	0	228
Kenneth City	1.30	0.24	4,400	33,962	1	6,155
Key Biscayne	120.39	0.1	10,623	86,599	1	8,225
Key West	23.49	0.13	25,478	43,021	0	4,285
Keystone Heights	7.19	0.28	1,349	39,519	0	297
Kissimmee	46.95	0.14	47,814	33,949	0	2,867
Lady Lake	13.10	0.26	11,908	32,581	0	1,787
Lake Mary	34.45	0.27	11,584	69,485	0	1,331
Lake Park	0.33	0.15	8,721	33,983	1	4,019
Lake Placid	18.29	0.15	1,668	21,178	1	650
Lake Wales	7.71	0.19	10,249	26,884	0	764
Lake Worth	8.86	0.15	35,133	30,034	0	6,226
Lakeland	4.58	0.19	78,452	33,119	1	-
Largo	9.78	0.17	69,371	32,217	1	4,429
Lauderdale Lakes	5.93	0.12	31,705	26,932	1	8,832
Lauderhill	40.65	0.11	57,585	32,515	1	7,893
Layton	3.08	0.33	186	53,750	0	860

Leesburg	25.06	0.17	15,986	25,988	0	855
Longboat Key	138.66	0.22	7,603	90,251	0	1,546
Longwood	25.65	0.26	13,834	51,667	0	2,584
Lynn Haven	13.58	0.28	12,527	42,105	0	1,528
Maitland	107.49	0.25	12,019	57,845	0	2,589
Malabar	1.68	0.3	2,622	49,674	0	247
Marathon	80.95	0.15	10,235	36,010		1,186
Marco Island	21.13	0.24	14,934	60,357	0	1,407
Marianna	7.70	0.19	6,230	23,861	0	776
Mascotte	60.02	0.18	2,687	38,558	0	1,106
Medley	273.04	0.02	1,098	23,167	1	291
Melbourne	5.97	0.23	71,382	34,571	0	2,364
Mexico Beach	40.91	0.25	1,017	31,950	0	777
Miami	21.52	0.09	362,470	23,483	0	10,161
Miami Beach	22.77	0.05	87,933	27,322	0	12,502
Micanopy	1.15	0.26	653	27,778	0	631
Milton	34.91	0.2	7,045	30,060	0	1,611
Minneola	19.73	0.26	5,435	46,250	1	1,779
Monticello	0.30	0.23	2,533	28,720	1	749
Mount Dora	98.79	0.23	9,418	36,086	0	1,915
Naples	19.05	0.2	20,976	65,641	1	1,744
Neptune Beach	20.43	0.26	7,270	53,576	0	2,969
Newberry	15.14	0.2	3,316	34,130	0	74
North Miami	8.80	0.13	59,880	29,778	0	7,080
North Palm Beach	4.07	0.2	12,110	53,163	0	3,388
North Port	35.30	0.31	22,797	36,560	0	305
Oak Hill	12.62	0.2	1,378	32,130	1	216
Oakland Park	56.54	0.13	30,966	35,493	0	4,915
Ocala	14.39	0.19	45,943	30,888	0	1,189
Ocean Breeze Park	0.76	0.03	463	15,709	0	2,707
Ocean Ridge	4.12	0.28	1,636	70,625	0	1,910
Ocoee	20.71	0.26	24,391	53,225	0	1,843
Oldsmar	41.80	0.22	12,051	50,354	1	1,336
Opa-Locka	24.76	0.11	14,951	19,631	1	3,452
Orange City	43.09	0.22	6,604	26,883	0	1,091
Orange Park	2.09	0.23	9,081	47,631	0	2,331
Orchid	5.14	0.38	140	200,000	0	114
Orlando	25.80	0.15	185,951	35,732	0	1,989
Ormond Beach	11.40	0.29	36,301	43,364	0	1,410
Oviedo	35.04	0.27	26,316	64,119	0	1,739
Pahokee	25.30	0.1	5,985	26,731	0	1,109
Palm Bay	8.06	0.26	79,413	36,508	0	1,248
Palm Beach	112.80	0.17	10,468	94,562	1	2,669
Palm Beach Gardens	43.60	0.27	35,058	59,776	0	630
Palm Beach Shores	10.75	0.2	1,269	47,262	1	5,011
Palm Coast	30.64	0.34	32,732	41,570	0	645
Panama City	5.61	0.21	36,417	31,572	0	1,775
Panama City Beach	4.03	0.27	7,671	41,198	0	1,105
Parkland	11.64	0.26	14,210	102,624	0	1,357
Pembroke Park	20.66	0.06	6,299	22,605	0	4,466

Pembroke Pines	7.07	0.22	137,427	52,629	0	4,158
Pensacola	37.02	0.25	56,255	34,779	0	2,479
Perry	14.08	0.21	6,847	25,986	0	737
Pierson	4.48	0.08	2,596	26,773	1	319
Pinellas Park	14.32	0.24	45,658	35,048	1	3,096
Plant City	5.18	0.21	29,915	37,584	0	1,322
Plantation	10.48	0.22	82,934	53,746	0	3,815
Port Orange	12.73	0.26	45,823	38,783	0	1,855
Port Richey	560.20	0.2	3,021	27,404	0	1,434
Port St. Lucie	8.26	0.29	88,769	40,509	1	1,175
Punta Gorda	30.04	0.33	14,344	48,916	1	1,013
Quincy	54.04	0.26	6,982	29,393	1	916
Riviera Beach	25.32	0.15	29,884	32,111	1	3,585
Safety Harbor	16.99	0.27	17,280	51,378	1	3,498
Saint Augustine	22.09	0.21	11,686	32,358	1	1,385
Saint Augustine Beach	1.99	0.22	4,683	43,505	1	2,413
Saint Cloud	63.27	0.24	20,074	36,467	1	2,191
Saint Leo	18.80	0.04	595	37,917	0	370
San Antonio	32.94	0.27	655	43,125	1	532
Sanibel	110.71	0.32	6,064	79,044	0	352
Sarasota	36.74	0.19	52,715	34,077	0	3,540
Sebastian	13.49	0.33	16,203	39,327	1	1,282
South Bay	67.81	0.1	3,859	23,558	0	1,425
South Daytona	32.59	0.23	13,114	31,180	0	3,698
Starke	0.34	0.19	5,593	27,021	0	839
Sunny Isles Beach	66.74	0.02	15,330	31,627	0	15,231
Sunrise	16.67	0.19	85,779	40,998	0	4,713
Tallahassee	29.25	0.16	150,624	30,571	0	1,574
Tamarac	7.93	0.23	55,588	34,290	0	4,880
Tampa	6.99	0.2	303,447	34,415	0	2,708
Tarpon Springs	8.67	0.25	21,003	38,251	0	2,297
Temple Terrace	13.77	0.22	21,171	44,508	0	3,051
Titusville	14.95	0.25	40,670	35,607	0	1,913
Trenton	4.38	0.17	1,617	25,259	1	623
Umatilla	5.29	0.23	2,214	29,628	0	871
Vero Beach	23.14	0.22	17,635	38,427	1	1,599
Virginia Gardens	2.52	0.17	2,348	40,197	1	7,821
Waldo	0.91	0.18	821	24,028	0	478
Wellington	23.00	0.26	38,216	70,271	1	1,231
West Melbourne	7.14	0.22	10,026	37,391	0	1,256
West Palm Beach	19.49	0.16	82,103	36,774	0	1,489
Weston	78.83	0	49,286	80,920	1	2,074
Wildwood	53.82	0.14	3,924	23,357	1	760
Williston	17.73	0.21	2,297	25,795	1	379
Windermere	7.65	0.32	1,897	88,809	0	1,688
Winter Garden	14.47	0.18	14,993	37,129		1,190
Winter Haven	15.74	0.18	26,487	31,884	1	1,498
Winter Park	72.80	0.24	24,090	48,884	0	3,282
Worthington Springs	1571.98	0.12	193	25,625		537
Yankeetown	9.85	0.39	629	33,304	1	80

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BIOGRAPHICAL SKETCH

Education

- Ph. D Candidate (ABD) in Askew School of Public Administration and Public Policy, Florida State Univ., FL, U.S.A.
- Master of Public Administration, 2000, Maxwell School of Citizenship and Public Affairs, Syracuse University, New York, U.S.A.
- M.A. in Public Administration, Hanyang University, Seoul, Korea, 1997
- B.A. in Public Administration, Hanyang University, Seoul, Korea, 1994

Professional Work Experience

- Graduate Assistant, Dept. of Public Administration, Florida State University, 08/03 – 08/04
- Research Assistant, Office of the President, Florida State University, 05/02-07/03
- Lab Assistant, Dept. of Public Administration, Florida State University, 09/01- 12/01
- Research Assistant, Center for Tobacco Education, Florida State University, 06/01-08/01
- Researcher, Korea Institute for National Competitiveness, Seoul, Korea, 09/97-04/99
- Analyst of election campaign polling committee, New Korea Party (Ruling Party), 05/97-08/97
- Researcher, Center for Local Autonomy, Hanyang University, Seoul, Korea, 07/95-02/96
- Assistant-chief, Seodaemun election district of New Korea Party, Korea, 02/96-04/96
- Research assistant, Hanyang University, Seoul, Korea, 12/93-12/94
- Summer/Winter Internship, Public Relations Bureau at New Korea Party, 12/91-08/93

Research Projects

- "The Long-term Development Strategies of Sungnam City in the 21st Century," Korea Institute for National Competitiveness, Submitted to Sungnam City, Kyunggido Province, Korea, 07/97-09/98
- "A Development Strategy for Seodaemun District," Funded by New Korea Party, Seoul, Korea, 02/96-04/96
- "Efficient Advertising Organization System in Competition Structure of Telecommunication Management," Hanyang University, Funded by Korea Telecom Corp., Seoul, Korea, 10/94-05/95

Publication

- In-Sung Kang, Feburuary 2004, "Innovation in Land Use Management Policy in Florida Cities," Policy Brief (Issue #11), DeVoe L. Moore Center, Florida State University
- In-Sung Kang, December 1996, "An Empirical Study on Job Satisfaction in the Public and Private Organizations," MA Dissertation, Department of Public Administration, Hanyang University, Seoul, Korea

Honors

- Dissertation Research Grant, Office of Graduate Studies, Florida State University, 10/04-06/05
- Ph. D. Dissertation Fellowship, DeVoe L. Moore Center, Florida State University, 08/03-08/04