IMPLEMENTATION OF GROWTH MANAGEMENT POLICY IN FLORIDA CITIES: ZONING APPROVAL AND REGULATORY POLICY ENFORCEMENT

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This study investigates 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 paper examines a broad set of government institutions extended to include the size and organization of city councils and standing committees. Our focus is on policy implementation rather than policy enactment and we apply the political market approach to examine how community demands and the political institutions of the supplier government influence how land use regulation is implemented. We focus on implementation of growth management as evidenced by zoning request approvals and regulatory enforcement. Theoretical framework includes the role of local institutions as supplier, political economy demands, and municipal context. For the hypotheses tests, we employ ordered-probit analysis.

Key Words: growth management, zoning, regulatory policy

INTRODUCTION

Many communities confront problems caused by urban sprawl and unplanned growth. These problems include traffic congestion and air pollution, loss of farm-land, 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). New development can produce benefits and expand local government revenue bases but it also creates pressures and challenges in terms of environmental resources, distribution of power, 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 land use policies can implement them differently resulting in divergent out-comes 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. It is extremely difficult to measure the restrictive nature of individual community land use regulations for two reasons. One is that land use regulations are unique in each local government with inter-jurisdictional variation in the specific provisions of similar-sounding measures (Ihlanfeldt, 2004). Second, city governmental policy implementation including interpretation and enforcement significantly affects the restrictiveness of land use regulation. For example, cities may differ tremendously in terms of willingness to strictly enforce land regulations.

This study finds answers to the following two questions: To what extent do city governments vary in their implementation of land use policies? And how do local demands, political institutions and community contexts influence implementation of growth management? 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 inter-city variation in how regulatory authority is exercised and how policies are implemented (Tavares, 2003). We begin to fill this gap in the literature by directly identifying how zoning and growth regulation is implemented. In addition cities are examined rather than counties which have been the focus on most previous works (Feiock, 2001). While the conceptual framework in this work is applicable to cities, it has only been tested on counties.

Growth Management Politics

Nelson defines 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). Central to growth management 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). Governmental ability to act as an independent yet responsive actor depends on the 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 governmental 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 governmental approach to development and growth according to state standards. This additional dimension of governmental 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, 1990).

Growth management requires a directive role by government. The dilemma is over the degree to which the state will intervene in local decision making 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.

IMPLEMENTATION OF GROWTH MANAGEMENT POLICY

Policy implementation of policy can be viewed from different angles and 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. 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 & Gilroy, 2001). It is the restrictiveness of the land use regime as implemented, rather than the formal policies that determine the constraints on new growth. Zoning requirements only function as a restriction to the extent they are binding. Alternatively, if cities regularly approve requests for zoning changes, zoning does not function as a binding constraint on new development. Likewise, land use regulations that are not stringently enforced are not a binding constraint.

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 are needed in a community but specific locations 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 impact 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 overall growth conditions of the city. In addition to influ-

ential regulatory policy on growth management, implementation of the regulatory policy also has a significant effect on the growth management policy of the city. 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. Where land use regulations are stringently enforced it greatly increases the cost and time necessary for new development and operates as a constraint on new growth.

THEORETICAL FRAMEWORK

Local Institutions and the Supply of Land Use Constraints

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. More than this institutions shape the individual incentives of elected and appointed officials in a way that influence policy implementation. Extant work reports that formal institutions can influence land use incentives and outcomes at the local level (Clingermayer & Feoick, 2001; Lubell et al, 2005). It is contend that political institutions such as form of government, council, and standing committee create incentives to constrain or accommodate growth in the policy implementation process. Based on the proposition that mayor-council governments will create more binding land use constraints the following hypotheses are advanced.

Hypotheses 1a: Mayor-Council government will have a negative influence on approvals of rezoning requests.

Hypotheses 1b: Mayor-Council government will have a positive influence on the stringency of enforcement for land use regulations.

The differences between professional management or reformed institutions and unreformed institutions have been thought to play a significant role in shaping the types of policies pursued by cities 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 careers as managers. Career advancement is supported by a reputation for efficiency, innovation, and promoting policy with city wide benefits. This provides incentives to implement zoning and land use rules in a manner that provides a binding constraint on growth. Conversely, elected officials are more interested in furthering political careers by pleasing electoral constituencies. This creates incentives to more flexibly implement land use rules and accommodate changes supported by influential constituents.

Institutional complexity and the fragmentation of electoral authority are also expected to lead to policy implementation that accommodates rather than constraints growth. It is hypothesized:

Hypotheses 2a: Council size will have a positive influence on approvals of rezoning requests.

Hypotheses 2b: Council size will have a negative influence on the stringency of enforcement for land use regulations.

Hypotheses 2c: Standing committees will have a positive influence on approvals of rezoning requests.

Hypotheses 2d: Standing committees will have a negative influence on the stringency of enforcement for land use regulations.

Institutional complexity in local legislative processes has been recently linked to local growth management (Gerber & Phillips, 2003) because institutional complexity including large council size and the use of standing committees create high entry barriers for policy process. Those seeking deviations from growth management may instead focus efforts on the implementation process. Legislative systems characterized by decentralized policy making, many actors involved, and relatively complex implementation procedure would advantage development interests over growth management. Further it creates incentives for elected officials to accommodate narrow geographic constituencies rather than broader growth management interests.

Growth management addresses externalities that growth in one area has on others in the community. This creates a political dilemma for representatives of small constituencies because stringent enforcement of binding constraints will be politically unpopular with specific constituents. Thus, we expect large councils and committees result in less binding growth management constraints.

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 a weak force which transform local government service decisions into a set of responses directly mirroring the interests of local consumers. Both economic and democratic political theories 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. Residents make "buying" decisions by moving from one local government to another that provides them better bundles of services. Meanwhile, providers as the business group are also interested in a local government that allows them to do business with less stringent growth management regulations.

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 to increase the 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 poli-

cies because redistribution imposes higher taxes on wealthier residents leading them to move to communities with lower taxes.

In terms of political economy, demanders in the local market have different incentives and interests. The interests of demanders whose actions drive the local market are explored assessing the degree to which interests are homogeneous and identifying the source of conflict between them. The preferences and interests of demanders are seen considering diversity of residents, political ideology, and business demand.

A positive relationship is expected as for the diversity of residents to set up the following hypotheses.

Hypotheses 3a: Cities with the high level of white people, personal income, homeownership, and education will have a positive influence on approvals of rezoning requests.

Hypotheses 3b: Cities with the high level of white people, personal income, homeownership, and education will have a positive influence on the stringency of enforcement for land use regulations.

The characteristics of community residents, such as, race, income, homeownership, and education diversity in the community shape incentives in support or opposition to growth management policy implementation. First of all, racial diversity or difference is one factor to affect growth management policy implementation. 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 & Ferguson, 1983; Schneider & Logan, 1982a). It is assumed that racial diversity would impact 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 higher incomes. In this situation, the community will favor strict policy implementation through exclusionary zoning and other land use policies (Schneider & Logan, 1982). It is expected that cities with the high personal income would prefer a high level of implementation 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 property tax bill is a direct function of the value of the house, the homeowners in a community attempt to attract rich newcomers to strengthen the local tax base. 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. Because people with high education attainment level have a greater chance to own a house through a stable income source, they prefer a strict growth management policy, seeking to live in a quiet and peaceful community. They would support spending more money for strict policy implementation.

Hypotheses 4a: Cities with high percentage of Democrats will have a negative influence on approvals of rezoning requests.

Hypotheses 4b: Cities with high percentage of Democrats will have a negative influence on the stringency of enforcement for land use regulations.

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. It is assumed that liberal communities and governments dominated by the Democrat would have a negative impact on the implementation of growth management policies.

Hypotheses 5a: Cities with more employees in real estate development and construction firm will have a negative influence on approvals of rezoning requests.

Hypotheses 5b: Cities with more employees in real estate development and construction firm will have a negative influence on the stringency of enforcement for land use regulations.

Hypotheses 5c: Cities with high level of environmental interests will have a positive influence on the stringency of enforcement for land use regulations.

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 & 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, and 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 investments and production activities. In the case of environmental interests they may not support implementation of zoning request approval, but in terms of regulatory policy implementation they would support strict enforcement of regulatory policy in that it avoid progrowth to preserve natural environment. Therefore, developers and builders would have a negative impact on implementation of growth management policies. Meanwhile, environmental interests would have a positive impact on implementation of regulatory policy enforcement.

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 & Neiman, 2002). Larger communities,

and central cities in particular, may be somewhat more distinctive in their orientations toward growth (Lewis 2001; Neiman, Andronovich & Fernandez, 2000). Larger communities tend to have a greater number of active political groups, which may lead to the development of more policies.

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, two factors are examined: growth pattern as the internal variables and county influence as the external variables.

In the case of growth pattern as the internal effects of city it is hypothesized:

Hypotheses 6a: Growth, density, and land change will have a positive influence on approvals of rezoning requests.

Hypotheses 6b: Growth, density, and land change will have a positive influence on the stringency of enforcement for land use regulations.

Since the growth management policies are closely related to the extent to which existing growth patterns threaten the natural resources of a community and quality of life, the economic and physical characteristics of cities affect policy implementation of the growth management. Rapid population growth results in a wide variety of social problems in the areas of transportation, housing, environments, and crime rates. 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 the implementa-

tion of growth management policies.

Compared to growth pattern as internal effects, a positive influence by county as external effects out of city is expected. County influence is hypothesized as:

Hypotheses 7a: County population and comprehensive expenditure, number of cities in a county and unincorporated population will have a positive influence on approvals of rezoning requests.

Hypotheses 7b: County population and comprehensive expenditure, number of cities in a county and unincorporated population will have a positive influence on the stringency of enforcement for land use regulations.

Cites and counties have a competitive relationship with growth management policies in that cities take into account population and expenditure of the county for secure tax bases. Depending upon the number of cities and unincorporated populations in a county a city implementation of growth management policy would be changed. In order to maintain stable tax sources, cities would attempt to avoid the exit of citizens to other city or unincorporated areas as appealing to citizens by spending more money for comprehensive planning and a strict implementation of growth management policy.

RESEARCH METHOD AND DESIGN

Growth Management Variables and Indicators

Specific hypotheses derived from institutions, political economy, and municipal context propositions were tested for cities in Florida. The dependent variables to measure the extent to which policy implementation leads to binding constraints on growth are derived from data gathered in a mail/web/telephone survey.

Three categories of independent variables are examined: political/governmental institutions, political economy demands, and municipality context <Table 1>. 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 planners was conducted. This survey will

partially replicate the ICMA instrument. Among the political/governmental institutions, form of government would be dummy variables. Also, council size and standing committee are measured by the number of commission seats and standing committee.

Political economy demands are 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, data from U.S. census and Florida Statistical Abstract was collected. 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 Democrats.

Next to the residents, business groups cover builder, developer, and environmental interests. For the interests of builder and developers an average construction and real estate firm size is used. In addition, environmental interests were measured by the support of environmental groups 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 the Florida Statistical Abstract (2000).

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 the survey. Ordered probit analysis will be employed for the implementation of growth management policy of innovative growth management policies. 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 be the appropriate analytical technique. A statistical software program is used (STATA 11.0) for the analysis.

Variables and Estimation Procedure for Ordered Probit Model

Table 1 reports variable description and predicted coefficient with the dependent variables, zoning request approval and regulatory policy enforcement.

Table 1. 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	% of Caucasian	+	+
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	+	+

Estimation Procedure

Table 2 and Table 3 are related to the 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 the sub-questions in each dependent variable were combined and reliably tested with Cronbach Alpha value (>.70).

Ordered Probit Model

As with the binary-outcome model, $y*$ is unobserved and thought of as the underlying tendency of an observed phenomenon, and it is 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.

$$yi* = xib + ei, \; ei \sim N(0, 1), \; \forall i = 1, \ldots, N \; (1).$$

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

$$\mu_{-1} = \text{-} , \text{ and } \; \mu_m = \text{+} .$$

Model Specification

Based on the previous discussion about key variables and estimation procedure the hypotheses using ordered probit model is tested. The specific model estimates the

Table 2. Descriptive Analysis of Zoning Approval

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 Caucasian	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 3. Descriptive Analysis of Regulatory Policy Enforcement

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 Caucasian	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

relationship between zoning request approval/regulatory policy enforcement and explanatory variables. A specific model is developed in the equation.

Equation:

Zoning Request Approval$_i$ (Regulatory Policy Enforcement$i$) = a_0 + a_1Political/Governmental Institutions + a_2Political Economic Demand + a_3Municipal Context + ε, Where a_0: Constant, i: each city, ε: 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, Average Construction Firm Size, Average 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

EMPIRICAL ANALYSIS AND FINDINGS

Table 4 and 5 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.

The results find support for the influence of political economy demand but not for political institutions. No evidence is found that the incentive structure created by local institutions influence the extent to which implementation of zoning imposes a binding constraint on

development. Instead implementation is shaped by community demands. In particular, median income, homeownership and percent of Democrats 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.

As predicted higher income makes communities less likely to approve zoning variances. High income areas favor binding constraints as a way to protect property values (Fischel, 2004). Homeownership, county comprehensive planning expenditure, and percent of Democrats are also linked to approval of zoning requests. Homeownership and county expenditures are positively associated with implementation of zoning request approval. Cities are more likely to approve the zoning request when the community has more owner occupied housing units and county 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 com-

Table 4. Ordered Probit Analysis- Zoning Request Approval

Variable	Zoning Request Approval	
	Coefficient	Standard Error
Form of Government	0.06340	0.14636
Council Size	0.00096	0.08259
Standing Committee	0.01639	0.01418
Percent of Caucasian	-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	
N	236	

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

Table 5. Ordered Probit Analysis- Regulatory Policy Enforcement

Variable	Zoning Request Approval	
	Coefficient	Standard Error
Form of Government	0.10319	0.14038
Council Size	0.00400	0.02961
Standing Committee	0.01548	0.01384
Percent of Caucasian	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	
N	292	

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

pete to secure financial resource, they can accommodate citizen activities related to housing and construction by the zoning requests.

Communities that have more Democrats have more stable and constrained land uses. While this imposes costs on developers and land owners, it is critical to the ability of growth management to address environmental externalities. This relationship is interpreted as indicating that the more liberal ideology in Democratic communities translates into support for environmental concerns over economic development.

Similar to the previous analysis findings for zoning request approval, regulatory enforcement was influenced by political economy demands and municipal context rather than political institutions. In political economy demands, median income, education, and percent of Democrats are significant variables on the demand side. In addition land area change is significant in the municipal context. Once again median income predicts stringent enforcement and binding constraints on growth. For land use regulation percentage of Democrats led to fewer constraints on development rather than more. This reflects the influence of developers and real estate interests in

local politics. While it is often individual homeowners who seek zoning variances, it is typically the building and construction industries that seek regulatory relief and flexibility in implementation of land use regulations. These groups are often supporters of the Democratic party. However, land area change showed different direction to our hypothesis that land change would have positive impact on regulatory policy enforcement. It is accepted 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 sustained management of the city to constrain development. Because people with high education and income levels have more chance to own a house through stable income sources, they often prefer strict growth management policy, seeking to live in a quiet and peaceful community.

IMPLICATIONS

Based on a political market approach, this research focused on exercise of discretionary powers in relation to growth management. This research also combined 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.

Three prime participants as local community actors: public officials, city residents, and local business organizations were identified as balanced between the political market and government influence. In addition these three participants into supplier and demander were classified in this political market approach. In terms of supply and demand public officials (government) were regarded as suppliers and residents & business (interests) with organizations as demanders. Considering supply and demand in the political market all the variables were placed into the category of institutions, political economy demands, and municipal context perspective.

One dramatic finding is that the incentives resulting from political institutions had no influence on policy implementation. This suggests that the forces shaping the enactment of legislation are different than those that influence the enforcement of the legislation. Alternatively, the influence of political institutions might be to mediate the influence of political economy demands rather than influence policy implementation.

The empirical results reveal that demand side factors have the most significant impact on implementation of growth management policy program. The variables, such as, median income and percent of Democrats have significant impacts to growth management policy implementation. Among the three perspectives, the political economy perspective is the most important and municipal context is the second. While the median income and Democrat variable are significant for the political economy perspective, county comprehensive expenditure and land area change are important variables in municipal context.

In conclusion, this study enables the evaluation of real growth management policy practice. Government engagement identified that institutions are insignificant in growth management policy implementation. Govern-

ment with initiatives of growth management played an active role to implement zoning approval and regulatory enforcement considering demands and municipal contexts. This study enhances understanding of how Florida cities deal with the dual pressures of competing for economic development and at the same time managing population growth.

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