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Growth Management at the Ballot Box: What are the Motivations and Outcomes?

DISSERTATION

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by

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The dissertation of Mai Thi Nguyen
is approved and is acceptable in quality
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DEDICATION

To

Dad and Mom

your love, wisdom, guidance, and faith,
made this a reality

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ABSTRACT OF THE DISSERTATION

Growth Management at the Ballot Box: What are the Motivations and Outcomes?

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The main purpose of this dissertation is to better understand the role of citizen participation in local growth politics and policy-making via the ballot box. Using a database of 436 growth management initiatives on the ballots in 159 California cities between 1986-2000 and city level demographic and housing data from the 1980, 1990, and 2000 Censuses, this study investigated the motivations for why cities propose and adopt growth management ballot measures. In addition, this study examined the effect of local growth management ballot measures on housing and socioeconomic change. Employing multivariate regression techniques, this study investigated the four competing hypotheses for why cities propose and adopt growth management policies. These hypotheses include: community status, growth pressures, strategic interaction, and metropolitan hierarchy. Furthermore, this research examined the effects of growth management ballot measures on housing and socioeconomic

change. The findings from this study reveal that there is very little evidence that the proposal and adoption of growth management ballot measures is motivated by a community's status or high rates of past growth, as is commonly believed. Rather, cities are more likely to resort to the ballot box to manage growth when other cities in their region are doing so, suggesting that there may be a contagion or diffusion effect. These results also indicate that local jurisdictions pay attention and respond to growth politics occurring in the larger region. Contrary to expected, the results reveal that growth management policies, adopted at the ballot box, are not effective in slowing down housing growth. Finally, there is evidence that cities that qualify growth management ballot measures have higher rates of growth in White population and smaller increases in Hispanic population. Although growth management ballot measures may not be motivated by elitist values or community status, there may be racially exclusionary consequences.

CHAPTER I: INTRODUCTION

There has been much attention towards investigating the motivations for why communities enact growth management policies. Even more effort has focused on the effects, both intended and untended, that growth management has on land and housing markets. While this is true of growth management in general, there has been less research on policies that are adopted by citizen initiatives and referenda, which are tools of the direct democracy process found in the U.S. Part of the reason for this is that the use of the direct democracy for growth management or land-use matters, in general, is a relatively recent phenomenon.

On a national scope, initiatives and referenda regarding land-use and growth have only recently shown up in significant numbers. In a national survey of measures on the ballots in the November 2000 election, Myers and Puentes (2001) identify a total of 553 state and local ballot measures that they remark, "will affect the pace, quality and shape of growth" (p. 3) in 38 states. Their survey also revealed that of all states qualifying growth management measures at the ballot box, California was the leader, representing 14% of all ballot measures relating to growth in 2000. This is not surprising since California has been the indisputable innovator of ballot box planning. In the past 20 years, no state has qualified or adopted more local land use or growth related measures at the ballot box than California (Caves, 1992; Fulton et al., 2000; Nguyen and Fulton, 2002).

As jurisdictions in California continue to adopt growth management measures at the ballot box and localities in other states follow suit, how will this change the local

political and planning processes? To better understand these trends, this dissertation will examine two related questions. First, what motivates local jurisdictions to utilize the ballot box to qualify and adopt growth related policies? Concerns about growth management as a tool for the wealthy to pull up the drawbridge on unwanted growth or undesirable in-migrants have been widely expressed by opponents of growth management and policy analysts (Danielson, 1976). A closely related argument suggests that growth management may be a tool to reproduce the existing stratified social structure (Logan, 1978). Residents and proponents of growth regulations tend to cite the need to alleviate the pressures from rapid growth. Evidence that residents do not realize the tax benefits, but pay the costs of growth, has fueled tremendous animosity towards growth (Schneider, 1992). Another viewpoint suggests that jurisdictions adopt growth restrictions in response to other places in the region adopting growth management because they do not want to absorb the spillover growth that might occur if they do not have similar restrictions (Brueckner, 1995, 1998).

The second question asks, "What are the outcomes of growth management measures enacted by citizens?" If outcomes reflect the desired effect on growth through the ballot box, then this suggests citizens can change the direction of growth by their votes. This would reward citizens for successfully mobilizing around a common cause, especially in the face of what is typically found in the American city: a strong pro-growth constituency of business elites and local government (Molotch, 1976). If growth outcomes do not appear consistent with the will of the people, then perhaps direct democracy is simply symbolic politics--a means to pacify dissatisfied citizens, while allowing growth to run its course as usual.

While there have been a substantial number of studies on growth management, there has been very little research on the role of citizens in creating this policy. This dissertation will bring together issues involving citizen power, the political process, and growth management in shaping urban growth. It is a timely and relevant topic, as levels of citizen distrust with government are high and confidence in local officials making the right decisions is waning (Baldassare, 2002). In addition, while ballot measures are appearing in substantial numbers across the country, there has been little scholarly research about the causes and consequences of voters legislating growth policies. This study is intended to contribute to scholarly discussions in this manner.

The remaining chapters in this dissertation are organized as follows. Chapter II lays the theoretical framework for understanding urban growth dynamics and spatial differentiation by bringing together the economic and political perspectives. Chapter III discusses the literature on citizen political participation in growth management, with an emphasis on the California growth politics. It will also discuss the literature on how growth management alters housing and population dynamics. A discussion of the research methods is provided in Chapter IV and includes a conceptual model, study hypotheses, data collection techniques, description of data, and models for logistic and multi-variate regression analyses. Chapter V presents the results for two sets of analyses. The first analysis employs logistic regression to examine the predictors of citizen enacted growth management policies. The second, analyzes the effect that citizen enacted growth management measures have on housing and population outcomes using ordinary least squares regression techniques. Chapter VI provides a discussion of the results, which

includes ideas for future research. Finally, Chapter VII provides a summary of the dissertation with thoughts on the policy implications.

CHAPTER II: THEORETICAL FOUNDATIONS OF URBAN GROWTH AND DIFFERENTIATION

Throughout most of the history of U.S. cities, there has been magnanimous support for growth and expansion due to the belief that urbanization is an inevitable and natural process that is beneficial to places. In the last several decades, many citizens have challenged this view, contending instead that they are not realizing the promises of lower taxes, more jobs, and better quality of life (Schneider, 1992). Instead, the problems that result from growth, such as piecemeal development, traffic congestion, air and water pollution, housing shortages, skyrocketing housing prices, and depletion of scenic open space, appear to be increasingly worse (DeGrove, 1995). These problems are associated with a change in the pace of life and the character of communities.

Many cities that have experienced tremendous growth pressures in the recent past have shifted the way they view growth. Whereas growth promotion was once the overriding goal in many American cities, concerns about the decline in the quality of city life has launched growth management to the forefront of a vast number of city agendas. Cities are no longer content with allowing market processes and traditional regulatory mechanisms to sort out the distribution of land and people, but rather, are intervening in the local growth process. This shift in city growth perspective has redirected attention back to fundamental questions of how and why cities grow, as well as, how land-uses are allocated in cities.

The literature on urban growth and differentiation can be separated into two different streams. The first body of literature places significant emphasis on economic

forces that shape growth. Perspectives that fit into this framework include: Human Ecology, Tiebout's (1956) theory of local public expenditures, and Peterson's (1981) city limits. Although these perspectives clearly rely on economic theory to explain spatial outcomes, they do so in different ways. Human Ecology emphasizes that survival within the urban environment demands that individuals compete in the land market. Through this 'benign' process of economic competition for space, people and firms are sorted out into their 'natural' areas. Tiebout's model of spatial differentiation involves consumers' purchase of local public goods. Consumers seek to find a community that matches their optimum tax/service bundle. In achieving this, consumers will sort out in space according to the maximization of their household preferences. Thus, Tiebout believes that urban spatial arrangements are determined by households' rational economic decisions. While Human Ecologists and Tiebout focus on the actions of households and firms, Peterson (1981) is concerned with the needs of local government. He argues that local governments are competing for scarce economic resources and are driven to promote economic growth. He argues that politics are irrelevant in local governments' decisions over growth because politics cannot change the primary goal of cities: growth promotion. While scholars from the economic perspective have contributed greatly to understanding the dynamics of growth, they have often been criticized for either ignoring or de-emphasizing the importance of politics.

The second body of literature attempts to fill the gap, by raising awareness about the importance of politics and the political process in shaping growth outcomes. Pluralism and Regime theorists, for example, challenge Peterson's (1981) economic imperative by asserting that local decisions are not always geared towards growth

promotion (Elkin, 1987; Stone, 1989). Rather, local decisions about growth are made through a process of cooperation and negotiation by a variety of groups who have a stake in growth outcomes (Stone 1989). Thus, it is important to understand the role of actors, their vested interest, and their political power in influencing local decisions. A better understanding about actors and their participation in the political process is especially pertinent to this study, which examines the role of citizens in managing local growth through the ballot box. Citizen enacted growth management ballot measures are becoming an increasingly popular means for citizens to attempt to affect growth outcomes. Finally, scholars from this more "political' tradition have highlighted the intersection between economics and politics in shaping urban growth policies (Logan and Molotch, 1987; Wong, 1988). A more thorough discussion of work from these two perspectives will be provided below.

A. Market-Based Theories of Urban Growth

1. Human Ecology

Some of the earliest thoughts regarding the mechanisms that underlie growth and spatial allocation of people and firms within U.S. cities came from the human ecological framework that was developed by a group of sociologists from the University of Chicago, (known as the "Chicago School"). Seminal works from Chicago School theorists, such as Park (1916, 1936), McKenzie (1924), and Burgess (1925) laid the foundation for much academic theorizing and empirical investigation of urban growth phenomenon.

Explanations of urban growth from the human ecology paradigm centers on economic competition, technological advancement, industrial change, and human adaptation to the environment. A basic premise of this perspective holds that communities compete for growth in order to achieve economic advantage. They vie for greater developments in technology and industry in order to make their community more attractive to firms and individuals. Growth, therefore, is largely a function of population migration from one area to another, due to advantages that the receiving area has accrued through technological and industrial innovations. In addition, the size of a community is also related to its resources and relative position within the ecological order (McKenzie, 1924).

When the population of a community fluctuates, a process of adaptation occurs, whereby individuals and firms reorganize themselves spatially by economically competing for optimum "vantage points of position" within the urbanizing area (McKenzie, 1924). Ecological theory maintains that the spatial distribution and differentiation of people and firms resulting from individuals' and firms' pursuit for land and space within the urban setting is the most efficient and optimal way to organize space. Park (1936) maintains,

> Under the influence of intensified competition, and the increased activity which competition involves, every individual and every species, each for itself, tends to discover the particular niche in the physical and living environment where it can survive and flourish with the greatest possible expansiveness consistent with its necessary dependence upon its neighbors (p. 10).

Ecologists believe that people and firms are functionally sorted out into "natural" areas through a process involving competition, invasion, and succession (Park, 1936).

Furthermore, they believe that spatial outcomes resemble the urban social structure, such that individuals with like characteristics (socioeconomic, racial/ethnic, etc.) and needs settle in particular locational niches. The ecological view holds that the sorting process and spatial outcomes that result are benign and functional for the maintenance of the urban system.

Thus, for ecologists, competitive market processes are the dominant factors driving growth and development. The notion that competition among actors is the primary mechanism of urban development can be traced back to the classic economic model of land markets (Alonso, 1964), which maintains that participation and competition in the land market is motivated by individuals' self-interest in maximizing their profits (i.e. exchange value of their property). Both ecological and classic economic theory, therefore, agree that the primary determinants of spatial outcomes are individuals' maximization of preferences. In addition, it is the aggregation of individuals' market transactions to achieve these preferences within a purely competitive land market that determines spatial outcomes. The aggregation of individuals' activities creates a market that is regulated by what Adam Smith (1776) calls, the "invisible hand," and not by any institutional or governmental unit. Both human ecologists and classical economists believe that the land market is most efficient when unregulated and left to its own devices. Neither of these perspectives views government, the state, or politics as significant components of the market. Nor does either of these perspectives believe that they should be. Microeconomic determinants are what take primacy over how people and land are allocated.

In the 1960's, a new paradigm emerged to challenge human ecology and market centered theories in general. This new paradigm, known by various different names, including critical theory, neo-Marxism, or urban political economy, focuses on understanding the deliberate motivations and actions of political and economic elites, structure of the political process, and unequal distribution of resources within the urban setting. These scholars pay special attention to issues such as conflict, power, and social inequality (Zukin, 1980; Walton, 1993; Smith, 1995). Scholars from this new paradigm challenge core human ecological assumptions about growth, such as the primacy of technology, "naturalness" of economic competition, and benign functional spatial sorting processes. Some of the main points of contention between Human Ecology and the new paradigm are highlighted below.

A main tenet of market-based theories, such as Human Ecology, revolves around the notion that local land and housing are commodities traded in a perfectly competitive market. Some have argued that this is not the case at all and that the markets for land and housing are not perfectly competitive (Logan and Molotch, 1987). Land and housing are much different than other commodities because they are tied to their location, their values are often associated with their relationship to the surrounding natural environment, and the unique qualities and amenities that pertain to them cannot be easily reproduced. Unlike other commodities that are not place specific, land and housing are difficult to move and change and, therefore, are somewhat permanent. These qualities lend support to the contention that land and housing markets are monopolistic. Logan and Molotch (1987) maintain, "Unlike widgets or Ford Pintos, more of the same product cannot be

added as market demand grows. Instead, the owner of a particular parcel controls all access to it and its given set of spatial relations" (p. 23-24).

If land and housing markets are monopolistic, as suggested, then owners of property have the ability to deny entry into the market by maintaining control of supply. The monopolistic nature of the land/housing market has profound implications for the ability of certain individuals (e.g. lower income) to enter into it. Even if they are able to enter, they may not have the resources for free mobility within the land/housing market because of the limited supply and the stratified structure of the market. To compound the problem of restricted supply created by monopolistic land/housing markets, other factors, such as land use regulations also have the potential to further constrain the "free market." They may do so indirectly by denying the construction of less expensive or multi-family residential development; the type of housing more often occupied by the lower income households (Danielson, 1976; Pendall, 2000). These constraints point to exclusionary tendencies in the land/housing market (Ellickson, 1977; White 1978; Bogart 1993) due to the monopolistic tendencies, which is evidence that the market is not "free" or open to everybody.

Another criticism of the Human Ecology perspective relates to the belief that spatial differentiation, inequality and stratification within the land/housing market are benign and natural results of microeconomic processes. Alternate perspectives point to more deliberate motivations behind these social phenomena, such as antagonistic social relations between actors, capital accumulation, and power inequalities (Gottdiener and Feagin, 1988). Logan (1978) maintains that the decentralization of political power allows people and organizations within local political boundaries to vie for resources within the

larger metropolitan area and therefore utilize their advantages—social, economic, political—in order to maintain or enhance their position within the metropolitan status hierarchy. Furthermore, he believes that the status differentials between various groups, inequality in their resources, and their relative position within the stratified metropolitan system affect spatial allocation and differentiation. Logan (1978) contends that, "Political, social and economic inequality among places should be understood not only as the *result* of differentiation, but also as a *cause* of the particular pattern of differentiation which evolves" (p. 406), suggesting that the causal direction runs in both directions. Others have also suggested that the stratified economic and spatial structure of cities prohibits some individuals from realizing their residential preferences, thereby affecting the spatial distribution (Harvey 1973; Castells 1977). Thus, alternative perspectives challenge Human Ecology's assumption about the benign nature of market forces in shaping spatial allocation and differentiation.

Human Ecologists consider microeconomic factors (e.g. profit seeking and rational self-interest of individuals) the primary force in the process of spatial organization and differentiation. The notion that land and housing markets are based primarily on "exchange value" within a perfectly competitive market that is propelled by the utility-maximizing behavior of individuals fails to consider some pertinent factors that shape the urban form in today's society. First, exchange value is not the only consideration that individuals base their market decisions on. "Use value," which, according to Harvey (1973), "...reflect a mix of social needs and requirements, personal idiosyncrasies, cultural habits, life-style habits, and the like...," play an important role in the land and housing market. Individuals have sentimental ties to their property and

neighborhood, are often locked into their property due to life-cycle factors, and sometimes place greater value on the use, rather than the exchange of their property. Furthermore, individuals can obtain non-monetary benefits from their property. This is not to say that exchange value is not an important consideration for individuals, but instead, suggests that use value can factor heavily on locational decisions. Moreover, it may be the tradeoff between use and exchange value that influences which house/neighborhood an individual chooses.

Human ecologists also suggest that urban form and spatial distribution is a consequence of the aggregation of individuals' or consumer/voters' preferences. They fail to consider the role that other participants may play in the land/housing market (Form 1954; Gottdiener and Feagin 1988, Smith 1995). There are a variety of actors, such as real estate agents, landlords, developers, financial institutions, government officials, bureaucrats and business elites within a community that have a stake in growth and development. The conflicts that may arise due to differing valuations of use and exchange of property, and the differences in power and resources between actors may result in the political manipulation of the land/housing market. For example, business elites may be more interested in promoting growth than homeowners because they are more interested in maximizing the exchange value of their property. However, homeowners may fight against growth because they would like to maintain the small town character of their community and are more concerned about the use value of their property. Not only are the variations in values, but imbalances in power and resources between the various actors that may bias the outcome in favor of those who are already advantaged.

Although market centered theories, such as human ecology, would like us to believe that conflicting interests are played out through market exchange, the reality of it is, property conflicts between actors within a local setting are often fought within the political arena. These perspectives ignore very important factors relating to the politics of space and place. The failure to incorporate the role of politics in shaping the urban form minimizes the importance of power, authority, public life, government, the state, conflict, conflict resolution, and a host of other factors (Caporaso and Levine, 1992). There has been much criticism of market based theories for their tendency towards economic determinism and their neglect of politics (Form, 1954; Molotch, 1976; Logan and Molotch, 1987; Molotch, 1988; Feiock, 1994; Logan, Whaley, and Crowder 1997) and much evidence that politics matter in determining land use and spatial outcomes (Logan and Zhou, 1989; Logan, 1978; Krannich and Humphrey, 1983; Katz and Rosen, 1987; Green and Schreuder, 1991; Calavita, 1992; Donovan and Neiman, 1992; Donovan, 1993). Neglecting to understand and incorporate political factors into explanations of urban spatial formation and failing to see the interplay between politics and economics is a major limitation of the human ecological perspective.

2. Tiebout's Apolitical Model of Local Public Expenditures

Charles Tiebout (1956), in his widely citied article, would agree with Human Ecology's assertion that individuals' maximization of preferences shapes growth and determines the distribution of people within cities. Where Tiebout differs is that he believes that the chief driver of spatial outcomes is preferences for public goods, not land

or housing. According to Tiebout, individuals or consumer/voters (to use Tiebout's lexicon) choose to move to communities that provide them with their ideal public service level at a price that they are willing to pay in taxes, otherwise known as their tax/service package. Some cities provide tax/services packages that appeal to more people, while others provide less, thereby determining the size of the community. A community reaches an optimal size when it can provide local public goods at the minimum average cost. When a community is not at its optimum size, it will either seek to attract new residents to promote growth, or become less desirable to some of the current residents and, therefore, induce residents to move out.

A key insight into Tiebout's model is that the spatial distribution of people occurs without the need for politics or government intervention because the market for public goods provides consumers with a wide variety of communities with different tax/service packages to choose from. Although Tiebout's model was labeled a "local government model," there was, ironically, an absence of government in the model. In his model, local governments do not determine the amount of local public expenditures on public goods, but instead, individual's preferences for optimal tax/service bundles do. Tiebout likens the behavior of local government in the market to that of a firm. He asserts that local governments respond to consumer/voters' demands by trying to provide public services at the lowest average cost for its current residents. In order to achieve this, local governments attempt to either attract or cause residents to move out in order to achieve the optimum community size that would allow for the best tax/service ratio. The level of public goods provided by local governments in Tiebout's model is very much driven by the demands of consumer/voters through their decision to locate in a community. This is

quite evident in Tiebout statement, "Spatial mobility provides the local-goods counterpart to the private market's shopping trip" (p. 422). Thus, for Tiebout, the key to understanding individual's demand and willingness to pay for public services is through the selection of their community of residence or their willingness to "vote with their feet."

As consumer/voters sort themselves out in space by moving to the community that best suits their tax/service needs, they also tend to concentrate themselves within a community of like individuals who have similar tastes and incomes, among other factors. This leads to the homogenization of communities in space and explains why spatial differentiation occurs. Very much like ecologists and classical economists, Tiebout's theory about growth and residential distribution is grounded on individual preferences and market competition. Moreover, the spatial concentration of like individuals, from Tiebout's perspective, as well as those mentioned above, is purely a benign outcome of market forces.

The spatial sorting of people into communities in Tiebout's model relies on a set of seven very stringent assumptions. These assumptions, because of their stringency, have met with serious skepticism regarding the practical application of the model. One of the most challenged assumptions involves the notion of free mobility. Tiebout's model allows for individuals to move from one jurisdiction to another, without any restrictions or barriers, if they are dissatisfied with their tax/service package. This implies that moving or "exit" is the main action that residents take in order to reveal their preferences and willingness to pay for different tax/service packages. As Orbell and Uno

(1972) and numerous others have argued, residents do not always exit when they are dissatisfied with their neighborhood. They can also decide to remain in the community and take action within the political system to create a better living situation. Furthermore, it is not apparent that all groups react to dissatisfaction of living environment in the same manner. There is evidence that race and location of residence (i.e. urban vs. non-urban) make a difference in how groups respond to neighborhood dissatisfaction (Orbell and Uno, 1972).

Another major implication of Tiebout's model is that politics play only a small role in determining public service levels. In Tiebout's model, cities compete with one another in order to maximize profits (i.e. their tax to service ratio) by attracting the desired number of residents. Their decisions and policies are determined by the preferences of residents who move in and out of their jurisdictions. As a result, there is no need for politics in this model. Epple and Zelenitz (1981) test Tiebout's apolitical model by trying to determine whether or not residents' utility levels and mobility are affected by changes in fiscal decisions made my government. Surprisingly, the results reveal that, on the whole, residents' utility levels and mobility are not affected by the levels of governments spending and the tax rate. Rather, it is only land owners whose utility change. This suggests that government decisions may only be in response to those who own land (e.g. the wealthier tier), which leads Epple and Zelenitz to conclude that the "...results vindicate researchers seeking to develop a positive political theory of local government behavior. Jurisdictional competition does not predetermine the outcome; Tiebout does need politics" (p.1216).

3. Limitations of the City

Building on Tiebout's ideas regarding fiscal competition between municipalities, Peterson (1981) believes that cities, due to structural constraints, are forced to promote policies that are geared towards the economic enhancement of the city. Peterson maintains that local governments, unlike the federal government, do not have the ability to force labor and capital to remain within the municipal boundaries. This limitation encourages cities to provide economic incentives to coerce labor and capital to remain within its boundaries. This leads to policies that Peterson labels as "developmental" versus other policies that do not encourage economic growth.

Analogous to Tiebout's proposition that individuals make rational decisions to choose a community that best matches their preferred tax/service ratio, Peterson asserts that the choice of cities to prioritize economic growth promoting policies is a rational fiscal decision. He explains, "...cities seek to improve their market position, their attractiveness as a locale for economic activity. In the market economy that characterizes Western society, an advantageous economic position means a competitive edge in the production and distribution of desired commodities relative to other localities" (p.22). In short, cities choose developmental policies because they have no other choice due to the structure of municipal finance in the U.S.

Also similar to Tiebout's theory, Peterson discounts the role of politics in shaping local policies. Peterson asserts that developmental goals are, for the most part, consensual among local politicians, especially in larger cities. It is only in small residential enclaves (e.g. suburbs) that are in close proximity to economic centers is this

not true. These types of communities can afford to not promote economic growth. For the majority of places, Peterson says that local business elites and politicians work together for the economic advantage of the city and there is little disagreement as to what the major emphasis of the city policies should be focused on: economic growth.

This discussion of market-based theories is not intended to discount microeconomic factors altogether, but to suggest that political processes within local areas in the U.S. also play a fundamental role in shaping spatial outcomes. Often times, decisions made through the political process provide the framework or guidelines in which market processes function. The theories discussed above place much emphasis on the aggregation of individuals' self-interested actions in the local land/housing market in molding spatial outcomes. They provide little insight into the complex interplay between actors and institutions as well as the imbalance in power and resources that may impact the ability of individuals/groups to affect the growth process. Furthermore, these theories fail to explore the detrimental effects of spatial differentiation, inequality, and stratification on certain groups in the urban setting. These arguments are not intended to minimize the role of economics, but to raise awareness about the importance of politics and the interaction between politics and economics in shaping the urban landscape.

B. Beyond Market-Based Theories

1. Multiple Bases of Power: Pluralism and Regime Theory

In the early 1960's, research about urban growth and spatial expansion began to move away from purely economic based explanations to posing questions such as, who has the power, economic and political resources, and organizational capacity to shape growth decisions? Or, is it the interests of the mayor seeking re-election, the business elites' need for the accumulation of capital, or wealthy suburban residents' fear of the ill effects of growth encroaching on their community that has the most influence on the spatial outcomes? Dahl's (1961) classic work in New Haven explores the question, "Who Governs?" Building on the work of community power theorists (see Hunter, 1953), Dahl's study found that growth policies and growth outcomes are the culmination of decisions made through the interaction and/or conflict between various sets of interest groups/actors. He also determined that growth decisions depend on the ability of the various groups/actors to garner economic and political resources on any a given issue. Therefore, he maintains that different policy issues are important in different cities and the interest groups that control the outcome of the issues also varies from city to city depending on their organizational capacity and their economic and political resources. Thus, according to Dahl, there is no monolithic power structure or growth regime that dominates communities. Rather, who dictates the community's stance on growth depends on the political context of the place.

One reason there is variation in governing power across cities, Dahl (1961) explains, is that the class of people interested and active in politics, the "political stratum," do not constitute a fixed group. Group membership within the political stratum is fluid, resulting in continual shifts in policy interests. Members of the political stratum do not hold the same beliefs on all issues, making it difficult to achieve consensus. This leads Dahl to maintain that within the political stratum, "There are many lines of cleavage" (p. 92). Another reason for the lack of consistency in local objectives across communities results from the different agenda of politicians. The adoption of local policy is often dependent on whether or not local politicians support it and they must weigh how their decisions will affect their chances for re-election. This concern over re-electability causes politicians to be extremely concerned about how their constituents will react to their policy decisions (Schneider, 1989). The reaction of constituents to decisions made by politicians will vary for different policies in different places.

Dahl's work led to the emergence of the pluralist perspective. Pluralists espouse the idea that there is no single dominating group that rules cities, but instead there are many sets of different leaders throughout communities. These various leaders all have unique combinations of political resources that they can garner in order to champion policy issues that are of concern to them. Policies that are adopted within a community, pluralists argue, are an outcome of coordination and interaction among a variety of politically active community members/groups.

The pluralist perspective has sparked much research surrounding the distribution of power within cities. Pluralists believe that by discovering who holds the reigns of power, they can uncover how policy decisions are made (Peterson, 1981). The difficulty

of matching policy decisions to powerful people soon became apparent, as Logan et al.1997) note, "...those who suspected a more monolithic power structure faced the difficult task of tracing connections between *influentials* in school politics, urban renewal, social welfare, labor relations, and other policy arenas..." (p. 604). There was, perhaps, more work necessary in order to understand city politics.

Inquiry into power in city politics was further developed by regime theorists. Instead of simply identifying the network of elites in cities, regime theorists expanded their research to questions about process and structure of governance. As Stone (2003) explains,

> ...the important considerations are not about who governs but about how governance occurs. Accordingly we need to know the extent to which various people and organizations work together and the terms on which they cooperate. Power lies not in the ands of some distinct group (who), but rather inheres in *how* people are related (p. 126).

With this understanding, regime theorists sought to determine the governing arrangements or regime of cities. A regime, according to Stone (1989) is defined as, "*the informal arrangements by which public bodies and private interests function together in order to be able to make and carry out governing decisions*" (p. 6). Unlike pluralists, who believe that the most powerful elites within a community compete with one another in order to direct policy outcomes, Stone believes that within cities there are two bodies of authority that must be involved in actions of governance. The first is the public sector, those entities that are controlled by the populace. The second is the private sphere, which includes parties who have ownership of private productive assets. This group consists primarily of the business sector, but may also include other persons involved in the private productive assets, such as leaders in the following sectors: labor-unions, non-

profit organizations, churches, to name a few. The key point of regime theory is that growth decisions and outcomes are a result of informal arrangements between the public bodies and private entities. These informal arrangements come about through a process of conflict, negotiation, and cooperation while working towards greater productive good for the city.

One major contention of regime theory is that no monolithic power structure or type of regime exists throughout American cities. Instead, Elkin (1987) explains, "Understanding contemporary city politics is largely an exercise in grasping the implications of the structural factors that define (1) the powers of cities, (2) the prerogatives of asset holders, and (3) the relations between them" (p.33). In order to illustrate the variations in regimes throughout time and across cities, Elkin describes three regimes: pluralist, federalist, and entrepreneurial. Pluralist regimes existed in the 1950s and 1960s in large cities in the Northwest and Midwest and were primarily concerned with economic development of downtown areas through shaping land use. The pluralist regime consisted of a coalition that was broad based and stable, but there was a natural partnership between local business people and local officials, since the primary goal of the regime was economic development. In the 1970s, when many city governments experienced a fiscal crisis, federal funds were directed to local areas in the form of grants. The shift in dependence from business generated revenues to federal funds made the relationship between local governments and business more tenuous. This federal regime, as Elkin describes, is markedly different from the pluralist regime due to the deterioration of cohesiveness around a specific goal, (i.e. economic development). The funds received from the federal government could be used towards more redistributive ends rather than

the promotion of growth and development. A third regime, the entrepreneurial regime, was developed in cities, such as Dallas. This regime is characterized by a strong alliance between the business sector and government to create a good business climate. This did not occur through any form of coercion, as was apparent in the pluralist regime, but by creating a highly professional bureaucratic structure within government to advance the goal of creating a better civic and cultural climate. As a result, this would ultimately serve to make a city an attractive place to conduct business. Elkin explains that developing the type of environment that businesses are attracted to entails electing political figures that have similar goals as business. It does not entail coercing public officials to do special favors when they do not believe in the actions or goals.

Although studies such as Stone's and Elkin's from the regime perspective emphasize the interaction between the public and private sectors within the political process, they also call attention to the need to understand the historical and economic context within which these interactions take place. The variations in the political and economic contexts throughout cities contribute to the differences in power structures that are developed. Moreover, differences in the power structure lead to growth decisions that are unique across places.

2. One Regime: Growth Promotion

Contrary to regime theorists who contend that growth policies and regimes are the outcome of negotiation and cooperation from a variety of groups that have equal power in the negotiation process. Other scholars have argued that some groups are more

influential in shaping their growth agenda and pressure from these groups usually favors growth promotion policies (Molotch 1976, Peterson 1981). Therefore, the process of developing growth policies is not as inclusive as regime theorists suggest.

Similar to pluralism and regime theory, the growth machine hypothesis focuses on the process of negotiating and coalition building, but unlike these perspectives, the main goal of these actions, according to the growth machine, is to promote economic development and growth. Whereas the other perspectives suggest that there are multiple bases of power, the growth machine perspective contends that individuals who are most interested in shaping land use control the growth decisions within cities. Molotch (1976) argues that local growth and development is, for the most part, dictated by local business elites who have the resources and organizational capacity. They also have great potential for substantial monetary gains that result from growth decisions. For local business elites, growth promotion, as opposed to, growth restriction is the central organizing principal that is of interest because they have much to gain economically. Molotch (1988) suggests that there are certainly barriers to growth, but land based elites are the most "active and deliberate force" in shaping growth decisions in cities. These local elites often are able to utilize the political process and mobilize their efforts towards achieving their growth goals. This powerful constituency, who has much at stake and much to gain economically from growth, propelled Molotch to call this group the "growth machine."

3. A Synthetic Model: Economics and Politics

While much of the debate within the urban policymaking literature has been formulated as competing explanations between economics and politics, Wong (1988) provides a cogent discussion about how the intersection between economics and politics may provide a better perspective on how decisions are made in urban areas. He suggests that the Peterson's (1981) economic imperative model does not incorporate key non-economic factors, such as, "...institutions and the political process, political tradition and administrative norms, minority representation and neighborhood activism" (p. 4). Wong suggests that these non-economic factors have the potential to shape urban policy outcomes. His "political choice" model asserts that cities are constrained by economic structure, but within this economic structure, there are policy arenas in which political choices are made and these choices can influence policy outcomes.

The three different policy arenas include, redistributive, allocational, and developmental.[1] Redistributive policies are those that transfer income from the better off to the less well off population, such as welfare assistance to the poor that is funded by taxes. Allocational policies have a neutral economic impact on cities and they are neither redistributive nor developmental in nature. Developmental policies help to increase the economic advantage of cities relative to other cities by increasing the local tax base, encouraging businesses development, and enhancing the cities benefits/tax ratio. Wong argues that within each of these policy arenas, political choices that are made by interested actors/groups may not be in the economic interest of the city. As a consequence, policy outcomes do not guarantee fiscal advantages.

The notion that politics affect policy outcomes that are not economically advantageous to cities is a departure from Peterson's belief that consensual agreement over developmental policies is prevalent in cities. Wong argues that developmental programs are quite controversial because certain neighborhoods or groups in the city pay a disproportionate share of the costs accrued. Furthermore, Wong maintains that when affected groups feel disproportionately disadvantaged due to proposed or new development, this provides incentive and motivation to mobilize in order to challenge elected officials and business elites, who are usually in favor of developmental programs. When community groups are successful, developmental policies can be altered and development projects can be halted. Thus, he would argue that the growth machine can be defeated if community activism is successful.

Wong's political choice model raises awareness about the importance of political actors and their political interests. Without these factors, the economic model would predict that developmental policies will have positive impacts on cities and will work to expand economic development programs. His extension of the economic model posits that economic development program expansion can be mediated by different political choices by various powerful groups. He predicts that strong political leadership will lead to further expansion, public acceptance of development policy will lead to the stabilization, and community-based activism will result in slowing down or halting of developmental programs. Wong's synthetic model suggests that growth promotion is not the only type of regime that cities have, but that growth decisions are the result of decisions made by political actors pursuing their interests.

C. Summary

This chapter discusses different perspectives on how growth and development occur in urban areas. Much of the literature relating to this topic relies heavily on economic theory or political theory. Human ecologists, Tiebout, and Peterson rely on the foundations of microeconomic processes in order to explain the spatial expansion and distribution of cities. Another body of research, which pluralism, regime theory, and "growth machine" hypothesis are a part, emphasizes the politics of development within cities. These perspectives bring to the forefront the relevance of understanding the role that political actors and the political process play in the development of the urban areas. Moreover, this body of research brings to light the complexity of relationships between actors, their interests, and their capacity to influence the decision-making process within the urban setting. These two differing perspectives, economics and politics, are synthesized in Wong's political choice model. Wong's model synthesizes the two competing arguments and help to make sense of how both economics and politics works to shape urban development. His model shows that cities are constrained by the economic structure, which creates different policy arenas. Within these policy arenas, there are significant variations in the political choices that are made and these choices heavily influence policy outcomes. Unlike Molotch (1987) and Peterson (1981), who suggest that cities have an economic imperative that favors pro-growth and pro-development policies, Wong argues that residents, through community activism, have the

potential to influence policy decisions that are not fiscally advantageous (e.g. may be geared towards slowing down growth).

Harnessing the understanding that political decisions within different policy arenas depend on which actors/groups are involved and what their vested interests are, the next chapter will look specifically at the politics of anti-growth, especially among local residents. Do residents have the power to fight off strong development tendencies within cities? Can residents use "voice" to stem the tide of growth? Voice is not cost free, it often requires political and economic resources, as well as the capacity to organize, coordinate, negotiate, and persuade. The next chapter will examine why some communities are more capable of forming growth coalitions. Specifically, the power of citizens to shape growth and development through the use of the ballot box will be examined. Is the ballot box a tool that citizens can utilize in order to fight the powerful pro-growth constituency of business and government? Moreover, which cities are more likely and more successful at using the ballot box to control growth? These questions will be discussed in the next chapter.

CHAPTER III: THE ROLE OF POLITICS AND CITIZENS IN GROWTH MANAGEMENT

Following Wong's political choice model, this chapter will examine how urban development policies are shaped by a number of important groups/actors within the urban setting. Although Wong does not discuss the mechanisms whereby groups/actors shape developmental outcomes, his model implies that issues of human agency, collective political action, conflict, and structure are important determinants of local growth policies. Most importantly, his model emphasizes that groups/actors have the capacity to make the decision to grow or not to grow and that developmental outcomes are shaped by more complex forces than implied by economically driven models.

The following chapter will focus on the role of powerful groups/actors in shaping growth and development within the urban setting. Although there is still much dissention among urban scholars over the relative power that different groups/actors have to shape growth and development, there is little disagreement over which players are often at the forefront of local growth and development issues. These players include local governments, business elites, and local residents. In order to understand how growth and development decisions are made, it is necessary to explore each entity's vested interest in growth and development, their interactions with one another, political and economic resources, and organizational capacity to influence growth policies or change the existing political economic structure. Although it is necessary to understand the role of local government and business elites, the major emphasis of this dissertation will be the power of citizens to mobilize and effectively alter growth dynamics within local jurisdictions.

This chapter will begin with a discussion of how growth management is defined and how different conceptualizations of growth management may influence whether it is supported or adopted. Next, there will be a discussion about the major players interested in issues of local growth and urban development. These players include local government, business elites, and residents. This chapter will also highlight the major explanations regarding why residents in local jurisdictions mobilize and support anti-growth policies. These four explanations are related to community status, real growth pressures, metropolitan hierarchy, and strategic interaction between jurisdictions. This chapter also reviews the literature on the outcomes that result from growth management enactment. Does this new wave of growth management, which distinguishes itself from more traditional land-use and planning practices, do what is intended or does it have unexpected consequences? Finally, a brief discussion of the growth management system in California, with a special emphasis on the role of voters and the ballot box, will be examined.

A. Defining Growth Management

Growth management is a broad term, often meaning different things to different people. It is often discussed as if there is some universal understanding of what it encompasses, when, in fact, it is often misunderstood or misrepresented. This is especially evident when comparisons are made between citizen support for general concepts of, as opposed to, more specific measurements of growth management. While most citizens support the general idea of growth management, they are sometimes less

inclined to support more specific growth management techniques, especially if the associated costs disproportionately affect them. This begs the question, do citizens' attitudes towards growth management change when there is a distinction made between the general concept and more specific techniques or policies? Connerly (1986) raised this exact question over a decade ago, yet there has been very little emphasis on understanding the effect that different conceptualizations and operationalizations of growth management have on citizens' attitudes. Moreover, there has even been less research comparing attitudes towards different growth management techniques. For instance, do citizens favor urban growth boundaries more than population caps?

An examination of the empirical literature on growth management reveals that the evidence for what predicts citizen support for growth management policies is a mixed bag. Contributing to the inconsistent findings are a number of issues relating to the variations in definitions and measurements across studies. In some instances, growth management is differentiated from growth control, while in others it is not. It is often called slow-growth or anti-growth, which may be misleading since growth management encompasses growth promoting activities and policies as well. Growth management and environmental preservation are at times used interchangeably, when they are very different techniques and do not have the same coalition of supporters (Connerly, 1986). Finally, there are a host of different growth management techniques, from down-zoning to requiring adequate infrastructure, which get lumped under the category of growth management and discussed as if they are the same thing. Different growth management techniques garners support from different constituencies and most likely outcomes are conditional on the type of technique in question.

1. What does Growth Management Encompass?

When regulatory strategies attempting to curb growth were first implemented in California cities in the 1970's, they were intended to be quick fixes to the problems associated with rampant growth. Popularly called growth controls, they were considered by some as blunt instruments designed to impede growth and development. Housing/population caps, the strategy under fire in the famous Petaluma case, were an example of this type of growth control. Later on, growth management strategies, which were geared more towards guiding, directing, and planning for growth, rather than simply impeding it, were differentiated from growth controls (Feoick, 1994; DeGrove, 1995). The difference between growth control and growth management, therefore, is often conceived of as an issue of stringency—where growth control is more stringent than growth management.

Alternatively, Gottdiener (1983) believes that the difference lies in how growth management and growth control issues emerge as policy. He asserts, "The term 'growth management' captures the administrative nature of the practice. In contrast, 'growth control' represents the outcome of a political expression by a social force" (p. 566). Here, Gottdiener considers the distinction to be in the politicization of regulation, as well as, who sponsors it. He argues that growth management issues arise through 'routine' planning practices, typically steered by administrators. While growth control measures, on the other hand, are politicized and sometimes based on contested growth issues that are brought about by citizens through the political process (Gottdiener, 1981).

Some scholars make no distinction between the two, proposing instead that growth management and growth control techniques are difficult to disentangle (Landis, 1992; Fulton et al., 2002). Fulton et al. (2002) explain:

> Some authors make a strict distinction between *growth controls*, which limit the amount of development and restrict growth below its natural market rate (i.e. population and housing caps) and *growth management measures,* which regulate the quality, location, sequencing and impacts of development (i.e. infrastructure controls)...it is our belief that growth control policies usually involve elements of growth management and vice versa (p. 3).

Perhaps the blurred line between growth control and growth management is the reason that many scholars do not attempt to make a distinction and use the terms interchangeably. Other terms that are also used interchangeably with growth management include slow-growth or anti-growth. This is a bit misleading because sometimes growth management involves promoting growth, not just inhibiting it.

Contributing to the confusion over the terminology is its dynamic nature. Since the birth of the movement in the 1970s, growth management has evolved over the last decade, taking on new names, such as 'sustainable growth', 'livable communities', and 'smart growth.' Whereas the central focus of the growth management movement was to slow or stop growth, these "new" movements are much more supportive of growth, emphasizing the need for cities to recognize that growth is inevitable and that cities should, therefore, plan and accommodate it in a strategic manner (International City/County Management Association and Anderson, Geoff, 1998). Although the names and perspectives on growth appear to be moving in a different direction, it is still unclear whether the techniques that are used to plan and manage growth in these new movements are very much different from their traditional growth management predecessors (Burchell

et al., 2000). For the purposes of this study, growth management will be defined as the set of techniques that local jurisdictions use to direct, guide, restrict, or stop growth.

2. Differing Conceptualizations of Growth Management

Just as the definition of growth management has evolved over time, so too have the tools that encompass the practice. Today, there are so many tools related to growth management that the whole practice has become quite murky. In addition, the empirical studies on citizen support of growth management reveal broad variations in how growth management is conceptualized and measured. Growth management is sometimes conceptualized in the abstract or at a theoretical level, and other times, the focus is on specific growth management tools, such as population caps or zoning. Another distinction is made in how it is measured--hypothetical versus concrete. Hypothetical measurements are questions such as those that ask: "Would you support the adoption of a population cap?" Concrete measurements of growth management are real policies or ballot measures seeking voter approval. While there is considerable variation in the way growth management is conceptualized and measured, there is scant discussion about how these differences might affect citizen attitudes and responses. Attention to these differences might provide insight into inconsistencies found within this body of work.

A cursory look at understanding the difference between abstract or theoretical and substantive conceptualizations was first attempted by Van Liere and Dunlap (1981) in their study of support for the 1970's environment movement. In this think piece, Van Liere and Dunlap (1981) pose the question, "Does it make a difference how it's

measured?" The question is directed at whether studies of support for environmental quality among citizens are comparable to one another if what is deemed as "environmental concern" is sometimes conceptualized generally and other times more substantively (i.e. according to different areas of the environment, such as air, water, land, etc.). To determine whether or not different conceptualizations of environmental concern are indeed "tapping the same underlying constructs," Van Liere and Dunlap (1981) test two hypotheses. The first hypothesis holds that different measures of environmental concern should be highly correlated with one another if they are truly measuring the same constructs. The second hypothesis maintains that the same socioeconomic variables should be similarly correlated across different measures of environmental concern.

They test these hypotheses by creating two correlations matrixes. The first contains six different measures of environmental concern, including a population scale, pollution scale, natural resources scale, environmental regulations scale, environmental spending scale, and environmental behavior scale. The second matrix combines these six measures of environmental concern with socioeconomic variables. Their survey of 806 Washington state residents finds that there is little support for either of the two hypotheses. Their first correlation matrix containing the six different measures of environmental concern showed significant variation among the bivariate correlation coefficients (ranging from .10 to .64), which lead them to conclude that indeed, it makes a difference how environmental concern is measured.

The results from their second correlation matrix containing the six measures of environmental concern and five demographic variables (e.g. age, sex, residence, political

ideology, and education) found that there was much variation in the magnitude of association between the different measures of environmental concern and demographic variables. For example, when the demographic variable, age, is examined, it is not significantly associated with the population scale, but is significantly correlated with the other five measures of environmental concern. In addition, age is positively related to the environmental behavior scale, but negatively related to the other five measures of environmental concern. This reveals that there is little consistency between the relationship with age and different environmental concern measures. This pattern of inconsistency between correlations of environmental concern is true for all the demographic variables. These findings indicate that different socioeconomic variables are associated with different substantive environmental areas of concern, suggesting that it is important to be clear about the type of environmental concern being studied.

In light of Van Liere and Dunlap's findings, it would be worthwhile to examine studies of citizen support when growth management is measured at an abstract level, as opposed to when it is measured more specifically (i.e. when focusing on a specific tool or policy), in order to see if any consistent findings emerge within these categories. From a search of the literature, there are eleven studies that have tried to determine the predictors of support for growth management. Many of the studies are surveys of California residents, but other states, such as Florida, Oregon, and Delaware have also been studied. Most of the studies use survey methodology to gather data on support for growth management. The greatest variation between studies comes from the way in which growth management is measured. Some studies examine both general and specific measures, while others use only one type of measure. For a description of each study's

data and methods, measurement of support for growth management, whether growth management is conceptualized in general or specific, and whether it is a hypothetical or real measure, see Table 3.1.

As shown in Table 3.1, each study has the possibility of having one out of four combinations of growth management conceptualizations and measurements: general and hypothetical, general and real, specific and hypothetical, and specific and real. Classifying the studies according to this typology results in some interesting insights. For example, the five studies that examine support for growth management with general and hypothetical conceptualizations find little evidence that there is a systematic socioeconomic bias, as is often argued. Neiman and Loveridge's (1981) study of 459 Riverside, California voters find no evidence that there are social class differences in support for either environmental protection or local growth control when it is conceptualized generally. Similarly, the null findings for a social status bias from Baldassare's (1985) survey of Orange County, California residents leads to the conclusion that, "...local concern about growth can emerge among a broad range of individuals. Residents supporting growth controls had in common only a perceived decline in the community quality" (p. 46). Thus, Baldassare maintains that anti-growth sentiments are not a function of elite characteristics, but rather something more complicated. Connerly (1986) examines whether demographic variables are better predictors of support for growth control, measured both generally and more specifically. Overall, he finds that social status variables are better predictors of growth management when the costs are made explicit and when specific measures are identified rather than when it is measured in general. Baldassare and Wilson (1996) measure support for

general growth management over three different time periods, 1982-1988, 1989-1991, and 1992-1994. They find that socioeconomic status indicators are less able to predict support for growth management, measured generally, over time. They find that in 1982, individuals in the high-income category were more likely to support growth management, but in later years, high income was no longer significant. This suggests that over time, other factors, such as perceived lower quality of life, became more important predictors of support for growth management and that social status is not a consistent predictor. Not only do Medler and Muskatel (1979) find no relationship between high status and support for growth management, they find the opposite effect in a survey of Eugene, Oregon residents. When asked a general question about whether respondents believe that the city should attempt to limit population growth, high-income residents were more likely to oppose and low-income residents were more likely to support. The results from these studies reveal that when growth management is conceptualized generally and measured hypothetically, there is very little evidence that those at the top of the socio-economic hierarchy support growth management.

In contrast to the above results for general and hypothetical conceptualizations of growth management, studies that use general but real measures of growth management find more evidence that social status may influence support. Donovan et al.'s (1994) survey of California city planners found that cities with higher homeownership rates and more professionally employed residents had greater growth control activity. Higher social status, as measured by education level, is a positive predictor of growth control enactment in a study of California cities (Glickfeld and Levine, 1992). Levine et al. (1996) found quite a number of socioeconomic variables significantly associated with

growth control activity. Their survey of California city and county administrators finds that cities with: a greater white population, a smaller black population, a higher levels of government expenditure, larger increases in median rent, and a high proportion of college educated residents have a higher likelihood of having more growth regulations. The authors suggest that, "... the results seem to point to a certain 'NIMBY', exclusionary tendency among jurisdictions enacting measures" (p.35). While these three studies did not find that all their measures of social status were significant predictors of support for growth management, they did seem to find partial support. This can perhaps be attributed to the fact that the measurement of growth management was a real measure, as opposed to a hypothetical measure.

The two studies that examine specific and hypothetical measures of growth management find mixed results. Connerly (1986) found that while education and homeownership were significant positive predictors of support for growth management when the costs and type were specified, income and race were not. Neiman and Loveridge's (1981) general and hypothetical measure of support for agricultural preservation finds no support for an elite bias. The reason for these inconsistent findings may lie in the specification of growth management. Citizen support may depend on what the growth management measure is intended to do and how it will affect the individual.

An interesting finding emerges when studies that focus on specific and real measurements of growth management are examined. There are two studies that survey voters about ballot measures relating to agricultural preservation in Riverside, California (Gottdiener and Neiman, 1981; Neiman and Loveridge, 1981). Although both of these studies appear to examine the same topic in the same location, their results contradict one

another. Gottdiener and Neiman (1981) find that there is no relationship between income or education level and support for agricultural preservation. Therefore, they assert that there is no evidence that growth control is motivated by elitist viewpoints. In contrast, Neiman and Loveridge's (1981) results for support for Measure B, a specific policy requiring adequate public services in order to receive building permits, as well as, preserving agricultural lands, reveals that education and income are positively related. The authors explain that, "If a social class conflict exists for supporting environmental protection or local growth control, it appears more readily in the context of specific, real, and contested proposals," (p.769). Perhaps the difference in these two specific and real measures that appear to be the same is that they were placed on the ballots two years apart from one another and there were some situational circumstances that affected their outcome.

Two other studies that use specific and real measurements of growth management find contrasting evidence (Protash and Baldassare, 1983; Green and Schreuder, 1991). Protash and Baldassare's (1983) study of the predictors of growth control, which they measure as an additive score of how often density measurements are used in land use planning, finds that greater proportions of white-collar residents and owner-occupied housing encourages local anti-growth mobilization, which is positively related to the strength of growth control measures in local jurisdictions. Therefore, they find that social status measures are related to support for density measures. Green and Schreuder (1991) do not find similar social status biases in growth control adoption. Their study of support for downzoning measures in Wilmington, Delaware finds very little evidence that socioeconomic variables are associated with support for growth control. Rather, they

suggest that the main factor that is important in garnering support for downzoning is the extent of participation by neighborhood organizations.

After reviewing the empirical literature on support for growth management, it appears that how growth management is conceptualized and measured affects citizens' support. When growth management is measured generally and hypothetically, there appears to be very little evidence that social status is the driver of citizen support or that there is a demographic type that is more likely to support growth management. As Connerly (1986) maintains, citizens are more apt to support the general idea of growth management, but when asked about specific measures that may not be beneficial to their pocketbooks, they are less inclined to support it. Thus, general and hypothetical measures of growth and management may be more likely to tap into individual's attitudes towards government regulation and growth and not about how they would truly react to a specific growth policy. The results from studies that measure growth management generally and concretely find more evidence supporting the social status argument. This may be because all three of these studies use an additive measure of the number of growth management policies, therefore creating a growth management activity measure. The results from these studies indicate that higher social status is related to more growth management activity (or stricter growth regulations), which is consistent with what is expected. When growth management is conceptualized more specifically, regardless of whether it is measured hypothetically or concretely, the results vary significantly. The variation in results across specific types of measures is probably due to unique factors associated with the measure and also the ability of citizens to assess how the measure will affect them, individually, and their community, collectively. Their support of the

measure hinges on their attitude and perspective towards the specific measure in question and their assessment of its impacts.

It is evident from this review that differentiating between general, specific, hypothetical, and real measurements affects support for growth management. Although these are important distinctions to be made when studying support for growth management, there are few studies that have attempted to do so. In addition, there have been few studies that compare support between different types of growth management. One study that examines local growth management policies finds tremendous variation in support when different growth management techniques are compared to one another. Nguyen and Fulton (2002) examine support for city and county level growth management ballot measures in California from 1986-2000. Among the seven growth management techniques that they studied (e.g. population/housing caps, commercial/industrial caps, urban growth boundaries, infrastructure adequacy, zoning, general controls, and vote requirements), vote requirements and general controls were the most common slow growth measures that qualified for the ballots. Among the seven growth management techniques, voters adopted urban growth boundaries 70.3% and vote requirements 63.1% of the time. These two types of growth management strategies consistently garnered the most support among voters.

In their analysis, Nguyen and Fulton attempted to determine the characteristics of jurisdictions that were more likely to adopt different growth management tools by merging their growth management tool database with city and county level 1990 and 2000 U.S. Census data. They disaggregated the tools by whether or not they are intended to slow or promote growth. Nguyen and Fulton found that different slow-growth tools

were indeed associated with different city and county demographic characteristics. For example, cities with smaller population sizes were more likely to qualify vote requirements than larger cities and the opposite was true of urban growth boundaries. In addition, urban growth boundaries were found more often in cities with faster growing populations, while zoning qualified more often in slowly growing places. Furthermore, racial composition of the jurisdiction was associated with the frequency by which different tools appeared on the ballots. Urban growth boundaries tended to be a popular tool among cities with larger white populations and commercial/industrial caps and zoning were tools found more often in places with smaller white populations. Nguyen and Fulton claim that the most striking relationship between growth management tools and demographic characteristics is the finding that slow growth tools qualified for the ballots more often in cities that retained or grew in white population between 1990-2000. These types of cities had 114 tools that were slow-growth and only 18 that were pro-growth. When median income of jurisdiction was analyzed, there were some surprising results. Slow-growth tools, which have been touted as a mechanism for wealthy communities to keep out unwanted growth, were actually found more frequently in low-income cities. Roughly 80% of all tools were located in low-income cities. When income was examined at the county level, it was found that counties experiencing large increases in income growth from 1990 to 2000 were more likely to have slow-growth ballot measures.

These studies reveal that how growth management is conceptualization and measures affects both support for it and the outcomes that result. Thus, it is important to

be clear about what growth management is, how it is implemented, and which growth management tool is of concern.

B. Major Players in the Urban Development Game

1. Local Government

The human ecology and Tiebout perspectives pay little attention to the role of local government powers in growth and development. Subsequent research has acknowledged the instrumental role of the state in shaping the expansion of urban areas, both historically and currently (Gottdiener and Feagin, 1988). At the federal level, subsidies for transportation infrastructure, most notably the interstate highway system (Wachs, 1984), and housing, in the form of FHA and VA mortgage aid (Hanchett, 2001), have contributed to urban development and expansion. Peterson's (1981) main assertion revolves around the notion that local governments have little freedom to choose different types of policies because they are restricted by the economic, political, and institutional structure created by federal policies. Few would argue that decisions at the local level are made within the boundaries of federal policies, but many would challenge the belief that the main responsibility of local officials is to carry out the tasks passed down by the federal government. Stone (1987), for example, explains that local government officials do indeed,

> ...make genuine choices, albeit within structural boundaries. Local decision makers do not simply follow the imperatives that emanate from national political economy; they must also interpret those imperatives,

> apply them to local conditions, and act on them within the constraints of the political arrangements they build and maintain (p.4).

Stone argues that even though local government officials are restricted by federal policies, they still have a vast number of policy options to weigh and the actions they pursue have tremendous impacts on their localities.

Local government officials' positions on growth are influenced by a variety of considerations, of which the following three dominate: revenue to pay for public services, re-election (e.g. the viewpoint of their constituents), and their own growth ideology. Local governments receive insufficient funds from higher units (i.e. state and federal) to provide necessary public services. Consequently, they compete with neighboring local governments for mobile capital and labor (Elkin, 1987). These structural circumstances, in which local governments find themselves trapped by, leads Peterson (1981) to assert that local governments are more inclined to promote developmental policies, those which promote economic enhancement of the local area, as opposed to other policies that redistribute income to poorer residents or have a neutral effect on the economy. Those who believe that economic gain is the main imperative of local governments often believe that the role of local government is to promote growth. For others who contend that reelection is the overriding goal of local government officials, economic development or growth promotion activities can help them in the reelection bid. Schneider (1989) explains, "...to the extent that economic development improves the local tax base, it can help incumbents win reelection" (p. 35).

On the other hand, if there are powerful constituents who are in favor of anti-growth policies, they may be able to lobby local politicians to implement more growth

restrictive policies. This is especially true in suburban places, where officials are less fiscally strapped and do not feel a need to promote growth (Green and Fleischmann, 1991). It has been found that the type of places (i.e. suburb or central city) makes a difference in who lobbies local officials. In turn, this affects how local officials respond in these different types of places. Lewis (2001) explains,

> The prominence of different interest groups and constituencies in central cities is also likely to be systematically different than in suburbs, given central cities' position as regional business hubs, their traditional association with corporate command functions, and the higher costs running political campaigns there. Chambers of commerce, downtown business associations, and commercial developers are likely to be prominent and command political attention...Suburban politicians—again with less need, typically, for vibrant downtowns, corporate investment, or large-scale campaign contributions—may be more apt to pay attention to residential associations and homeowners or taxpayer groups (p.700).

Finally, local politicians may enter into office with their own growth ideology or agenda. Although they are influenced by the need to generate revenue to provide public services and concerned about the reactions of their constituents to their decisions, they are also driven by their individual viewpoints on how growth should occur in their city.

Once politicians establish their growth agendas, they have a variety of mechanisms to achieve their goals, whether it is stimulating or managing growth. A discussion of all the various tools that they have at their disposal is beyond the scope of this discussion, but a few will be highlighted. In terms of growth promotion, economic development is one major avenue that local governments can pursue. Economic development can involve any combination of the following: targeting public improvements, investing in public facilities in distressed neighborhoods, providing

subsidies and tax credits to businesses and streamlining the development process for projects (Fulton, 1999). These economic development strategies often involve land use changes. Unlike other powerful groups within the city, local governments have unique powers that enable them to promote growth, such as (1) police power; (2) eminent domain; (3) taxing power to raise revenue; and by (4) using money from taxes to build schools, sewers, roads, parks, and libraries (Patterson, 1988).

The extent of local control over growth depends on the structure of growth management provided by the state and region. For example, some states mandate that local governments develop and adopt a comprehensive growth management or land use plan. At the other extreme, a few states, such as Oregon, play a very strong role in land use planning. In 1973, Oregon passed the Land Conservation and Development Act, which established a statewide growth management strategy. This act required that cities, counties, and state agencies develop comprehensive plans that were coordinated and consistent with one another (De Grove, 1995). One revolutionary aspect of this new plan was that it required all cities in the state to create an urban growth boundary, which designates where growth can occur. Oregon's growth management strategy has the reputation of being one of the most comprehensive plans of any state. It works as a top down strategy whereby local governments must comply with state regulations in developing their growth management strategy.

In contrast to Oregon, the state that has a very weak role in growth management is California. As a result, the details of developing a growth management plan are left in the hands of local jurisdictions. Unlike the state government in Oregon, which provides clear guidelines as to the types of policies that local governments must adopt (i.e. urban

growth boundaries) and states goals for localities to achieve, state government in California is more involved in the procedures of the planning process. For example, local governments in California are required to develop a general plan that includes seven elements that address how to plan for land use, housing, circulation, conservation, open space, safety and noise. Although the state requires that these plans exist, they provide no enforcement mechanism that encourages local governments to carry out these plans (De Grove, 1995). Due to the lack of monitoring by state agencies, local governments have much freedom and flexibility in how they manage growth. In order to get local governments in California to comply with state mandates, such as providing "fair share" of affordable housing, citizens or groups must enter into litigation with local governments.

The comparison between growth management systems in Oregon and California highlights the differences in the role of local governments in growth management. In Oregon, local governments are heavily constrained by state mandates, whereas in California, they have much more control over how to devise and implement growth management plans. Regardless of the structure provided by state governments, local governments play a major role in how growth management strategies are implemented within their jurisdictions.

2. Business Elites

There is no question that decisions regarding urban development and growth are of great interest to the business community. Business elites keep a very keen eye on land

use changes and growth patterns because their livelihood often depends on it. Because they have their fingers on the pulse of developmental issues, business elites are generally actively involved and influential in local decision-making processes.

Molotch (1976) asserts that politically powerful local elites pressure local governments to adopt policies that promote growth and development. This pressure usually comes from parties that benefit the most economically from growth promotion, which include the real estate industry and firms conducting business within the local area. These entities have tremendous political clout in local politics because of their economic resources and their ability to organize and mobilize action. The desire of business entities for growth and their ability to pressure local officials to promote growth creates a powerful constituency for the city to be a "growth machine" (Molotch, 1976). The growth machine hypothesis involves two main contentions. First, local politics in the U.S. is controlled by land-based elites who are strongly in favor of growth. Second, these land-based elites are powerful constituencies that affect the outcomes of local growth policy (Molotch, 1976). Molotch's contention that the structure of governance within U.S. cities produces one type of regime (i.e. pro-growth) is highly contentious because this view portrays business elites as quite predatory and self-seeking.

This idea of one dominate growth regime and very few actors in the decision-making process conflicts with regime theory. Regime theory views the business sector, as one among a varied number of interest groups that participate in the collaborative decision-making process equally. Although regime theory does not depict business interests as manipulative, the empirical work by some regime theorists provides support

for the dominance of business in dictating local growth policies (Elkin, 1987; Stone, 1989).

This is not to say that because the business sector desires growth that this is necessarily the outcome. There are instances which growth may not occur even though the political will exists. Elkin (1987) explains that negotiations between local officials and investors (i.e. developers or businesses) may fall through even though both parties want growth. It may be the case that one party is not willing to provide enough incentive for the other party to agree to the terms of the contract. Growth may also be stunted due to opposition from interest groups. Actors or groups may be able to stop or slow down development on one project or create barriers to all future developments by implementing new development hurdles. Lastly, Elkin maintains that lower levels of development are likely to occur when local officials are able to receive funding from the state or the federal level for development or redevelopment. When local governments do not depend on land interests for money, they can be more restrictive about the location and type of developments in their jurisdiction. In other words, they do not have to bend to the will of developers who are most likely seeking to promote development to their advantage.

There is also evidence that battles between business and residents over issues of growth and temper the businesses power to dominate the development landscape (Swanstrom, 1985; Logan and Molotch, 1987. Schneider (1989) asserts, "...residents will oppose development that would otherwise be fiscally productive. This conflict can place a coalition of residents in opposition to the 'growth machine'—the usually dominant coalition of actors in communities who pursue economic growth" (p. 28). Schneider also argues that in the battle against residents, business elites attempt to

persuade local officials that growth will lead to prosperity. Their persuasion comes in the form of campaign contributions, helping to both elect and re-elect officials into office. In addition to support from local officials, business elites have very powerful allies. Logan and Molotch (1987) explain, "They [business elites] are assisted by lawyers, syndicators, and property brokers...who prosper as long as they can win decisions favoring their clients" (p.63). In many cities, such as San Francisco in the 1960's and 1970's, business entities, both 'big business' (i.e. national and international corporations) and 'small business,' such as those benefiting from local development (i.e. real estate industry, mortgage financing, etc.) had the economic and political capacity to mobilize and battle against those who might oppose their pro-growth, pro-development interests (Feinstein et al., 1986). Businesses' privileged standing in the local political arena not only comes from their economic and organizational resources, but their ability to wield a major threat to local jurisdictions. That is, the threat of 'exit.' If business elites are not granted what they need in order be profitable, they can threaten to leave and take with them the capital and employment that some cities so desperately desire (Peterson, 1981). The ability of businesses to be mobile grants them tremendous leverage power over other players in the urban political process.

3. Local Residents

Over the years, many communities have experienced the ill effects of rapid growth. They have seen their community develop and expand at unimaginable rates and they have paid the costs that are often passed on to residents in the form of higher taxes,

increased housing prices, greater travel time, overcrowded schools, decreased air quality, and the like. It is no surprise that residents have grown weary of rapid growth and have organized around the common interest of slowing down the pace of growth. Often times, these individuals use their status as citizens (i.e. their political power) within the political process to influence growth decisions.

Logan and Molotch (1987) contend that residents' interests in land use are related to both "exchange value" and "use value." Unlike business elites who are mainly concerned about the exchange value of their property (i.e. gains in property value or rents), residents tend to weigh the benefits accrued from their sentimental attachment to and economic investment in their property when making decisions about growth and land use. It is difficult to discern a community's growth agenda because it not only depends on the culmination of residents' valuations of exchange and use of their property and community, but also how their neighborhood fits into the larger political economic order. Logan and Molotch explain that there are great variations in how politics play out within communities,

> We cannot deduce a role, therefore, that will predict the outcome in all cases. Instead, we can only reiterate the critical determinants: (1) the strategic value of neighborhood in the larger systems of places (i.e., its changing utility in the rent generation process); (2) the nature of the internal pressures for exchange value returns and the particular strategies used; (3) the power and status of residents in the larger political economy; and (4) the sentiments and cultural systems of residents that guide the pursuit of local use values. The conditions and fate of any neighborhood stem from the way these factors come to be arrayed (p. 123).

Whether or not residents are successful at having their growth goals met is a more complicated question because residents' interests in preserving their community and tempering growth are often pitted against the powerful pro-growth constituency of

business and government. Many scholars suggest that the growth machine is a powerful entity to reckon with and that citizens neither have the organizational capacity nor the fortitude to successfully challenge the growth machine (Lyon et al., 1981; Vogel and Swanson, 1989). Guest and Oropesa (1984), suggest that coalitions of residents, which they refer to as "social blocs," have difficulty solving long-term problems, such as growth because, "...they lack sufficient size, permanence, and communications channels...many of the basic problems of local areas involve services and institutions spread over fairly large territories, while the social bloc primarily functions in a relatively delimited area" (p. 829).

Recently, there has been evidence that citizens are attempting to slow or stop the "growth machine." There has been increasing levels of political participation by citizens to attempt to control and/or manage local growth and land-use, especially in California where land use policies can be adopted through the ballot initiative process (Glickfeld, Graymer, Morrison 1987; Glickfeld and Levine 1992; Levine, Glickfeld and Fulton 1996; California Department of Housing and Community Development 2000; Fulton et al. 2000; Myers and Puentes 2001; Fulton et al. 2002; Nguyen and Fulton 2002). The success of citizen activism in growth and land-use related issues is claimed to be found more often in higher status (e.g. wealthier, more educated, suburban) communities (Logan and Molotch 1987; Donovan 1993; Protash and Baldassare 1983; Clark and Goetz 1994;), but it appears that this trend towards increasing citizen participation in land use policies is spreading to a more diverse number of communities (Fulton et al. 2002; Nguyen and Fulton 2002).

Hogen-esch (2001) suggests that the way in which battles over growth have been conceptualized does not effectively capture the reality of what is going on. He argues that there are instances in which business elites and residents share a common vision about the growth of their community. Hogen-esch explains that the issues regarding growth have revolved around pro- versus anti-growth, whereas, in the case of the succession movement in Los Angeles, the controversy over growth revolved around the *type* of growth. Both residents and business entities had the desire to promote growth, but only certain kinds of growth. Hogen-esch describes the shared goals of residents and business in Los Angeles, "This common vision of urban space seeks to protect single-family areas and create high-end retail districts catering to middle-class tastes while contributing to a vibrant business climate and generating tax revenue to pay for services. Meanwhile, poor residents and undesirable businesses are excluded to other areas" (p.787).

Irrespective of where they stand on growth issues, citizen residents generally have a set of common tools that they can use in order to handle their dissatisfaction with their community. Moving (i.e. exit) to a locality/city that they would be more satisfied with is one possibility, as suggested by the Tiebout model. Another line of action that residents can take is to "voice" their dissatisfaction. Voice is defined by Hirschman (1970) as,

> ...any attempt at all to change, rather than to escape from, an objectionable state of affairs, whether through individual or collective petition to the management directly in charge, through appeal to a higher authority with the intention of forcing a change in management, or through various types of actions and protests, including those that are meant to mobilize public opinion (p. 30).

There are a variety of ways in which residents who are dissatisfied with neighborhood conditions or municipal policies decide against exiting can have their voices heard. Some of the mechanisms include, electing officials whose political ideologies are aligned with their own, contacting local officials (e.g. letters, phone calls, participate in meetings), and participating in protest demonstrations. Some states allow citizens to propose and adopt legislation through the initiative and referenda process, which is another mechanism whereby citizen residents can take action to voice. This may well be one of the most powerful tools that citizens can use to voice their concerns and alter growth policies and outcomes according to their own preferences. The participation of citizens within the local decision-making process will be explored further in the next section.

C. Citizen Participation and Mobilization in the Local Decision-Making Process

When residents are dissatisfied with municipal issues, such as rapid rates of growth and the problems associated with it, there are a number of ways that they can react. Tiebout's hypothesis suggests that residents are most likely to move or "exit" their current municipality in exchange for a more preferable one when they are dissatisfied with their local services. Residents will seek a community that better satisfies their tax/service needs. Lyons, Lowery and DeHoog (1992) develop a model of citizen responses to local government dissatisfaction that incorporates Tiebout's exit response with three other possible responses. Their model, the Exit, Voice, Loyalty, Neglect or EVLN model, is an extension of Hirschman's (1970) work on the rational behavior of consumers in response to declines in quality of firms or organizations. Exit involves the

decision to move out of the current community or to disengage from using public services (i.e. paying for your children to attend private school). Voice can represent any number of activities that individuals use to attempt to alter the existing condition of the community, which usually involves making one's preferences/concerns heard or recognized by those who make policy decisions. Examples of voice include writing letters to local officials, signing petitions, attending city council meetings, voting, or picketing. Acts of loyalty entail inaction or being passive about one's dissatisfaction, yet feeling that the situation that is the cause of the dissatisfaction will improve and/or that the system that typically works to address the municipal problem will rectify the situation and alleviate the individual of the dissatisfaction. Finally, neglect involves recognizing the dissatisfaction, but not concerning oneself directly with it or the source of it. According to Lyons et al. (1992), neglect encompasses a variety of sentiments, such as, "disaffection, alienation, cynicism, and distrust" and can manifest itself in actions (or non-actions), such as not voting or avoiding taxes" (p. 55).

For the purposes of understanding why citizens participate in ballot box activity, it is relevant to explore the conditions under which citizens are more likely to voice because signing ballot measure petitions, promoting, and voting for ballot measures are all activities that fall under the rubric of voice. According to the EVLN model, Lyons and colleagues predict that individuals will be more likely to respond to dissatisfaction with local government (e.g. their tax/service package) through voice actions if they experienced past (and present) satisfaction with their local government,[2] have high levels of investment in their current community, such as being long time residents or having children attending local schools, and have many alterative communities that they could

move to. This last proposition that states that having many alternative communities leads to voice behaviors (and not exit) is contradictory of Tiebout's hypothesis. Tiebout's (1956) main proposition is that individual's will choose to move if they are dissatisfied with their local government. More clarification on this point will be made when the results of Lyon et al.'s (1992) study are revealed.

When the authors attempted to combine five questions to create the investment measure, they found that the question regarding homeownership did not highly correlate with the other questions. Therefore, they created a separate measure for homeownership in order to see if homeownership status, which is expected to be positively related to voice, is a significant indicator (see Lyons et al, 1992, pgs. 46-65 for detailed description of model).

Lyons et al. (1992) tested this model on two counties in Kentucky, Lexington-Fayette and Louisville-Jefferson. Their results revealed that individuals who become more dissatisfied over time, had higher levels of investment in their community, and were homeowners versus renters, were more likely to exhibit voice behaviors when they were dissatisfied. This model also revealed that education and income are positively related to voice. Having alternative communities that matched their tax/service package was not a significant predictor of voice. On the contrary, fewer alternatives appeared to increase the likelihood of voice and decrease the choice to exit, which is consistent with Tiebout's hypothesis.

Compared to other political participation studies at the individual level, these findings, especially education, income, investment, and homeownership status, are quite consistent. A survey of Californians conducted by the Public Policy Institute of

California (2002), for example, reports that, "participation in all kinds of local land use and development activities tends to increase with income, age, education, homeownership and years of residence" (p .12). This study also found whites considerably more likely to exhibit voice behaviors relating to land use and development issues, including such actions as attending meetings or voting on land use related issues. Fischel's (2001) homevoter hypothesis also emphasizes the importance of homeownership as an economic investment in encouraging residents to voice. His homevoter hypothesis posits that,

> As a result of this enormous concentration in wealth in one asset, people who buy houses are more careful about it than almost any other episodic transaction...it makes homeowners---the dominant municipal stockholders—eager to organize to prevent the unhappy events that reduce their home values. Once you have made the purchase, your only protection against community decline is watchfulness and activism" (p. 75).

In a comprehensive review of the political participation literature, Sharp (2003) discusses the variations in participation in politics and public affairs among individual groups. Many of these activities would be categorized by Lyons et al. as voice responses. In general, Sharp states that electoral participation in city elections is much lower than national elections. When voters do turn out, there are significant differences in who is likely to do so. She explains that whites from more privileged socioeconomic backgrounds are much more likely to vote than minorities who are of lower socioeconomic standing. Furthermore, she asserts that race not only affects levels of voting, but also is an indicator of how a person votes, especially in elections where there are differences in the race of the candidate. Socioeconomic and racial biases also exist in the levels of citizen-initiated contacts with public officials and interest group

participation. Individuals with higher socioeconomic status are more likely to contact public officials regarding matters that affect the community and they are more often involved in neighborhood organizations. Even in political activities that have been historically shown to be biased towards the marginalized "outsiders" (i.e. lower socioeconomic tier), such as public protesting, empirical studies reveal that the wealthier are more likely to participate (Inglehart, 1990).

Although many of the same factors that are believed to explain political participation at the individual level are the same at the city level, there is evidence to suggest that results from individual level analyses should not be generalized to the city level. For example, Crain and Rosenthal's (1967) study of the effect of socio-economic status on the decision-making process of eight controversial city issues found that cities at the very high end and at the low end of the socio-economic continuum had organizational structures that were better able to mobilize when a decision needed to be made. This curvilinear finding at the aggregate level is counter to what is known about individual level analyses of political participation (i.e. higher status individuals are more likely to participate) and, therefore, there is something about group or contextual dynamics that contributes to the understanding of political participation. Medler and Mushkatel's (1979) study of support for Oregon's Measure 10, a measure to repeal the land-use coordinative statutes that were adopted in a Senate Bill (SB 100), also suggests that results from individual level analyses should not be generalized to the city or neighborhood level. They find that at the individual level, more persons with higher income were more likely to be opposed to Measure 10, but at the city level, there was a positive relationship between income and support for Measure 10. The contradictory

relationships at the different levels of analysis suggest that the results from individual level analyses cannot be generalized to larger geographical units.

Part of the explanation for these differences in individual and city level analyses is partly due to issues surrounding mobilization. While some political participation activities can be effective if conducted individually, such as calling an elected official, there are other types of activities that require mobilizing a coalition of common interests in order to be successful. Defeating or adopting ballot measure initiatives, for example, commonly requires the mobilization of voters, either to sign petitions to qualify ballot measures or to encourage voters to go to the polls (Gerber, 1999). The need for coordination and collective action among citizens potentially poses a barrier for some jurisdictions to qualify and adopt ballot measures. Thus, it is also important to examine the reasons why jurisdictional level factors may influence political participation.

First, it is believed that higher status communities are more capable of mobilizing because they are more homogeneous and, therefore, share similar values, preferences, or needs. Guest and Oropesa's (1984) study of community problem-solving capacity, for example, finds that homogeneous communities are better able to mobilize to solve problems because greater social solidarity is found in these types of communities. Similarly, Burbank et al. (2000) state, "...individuals with higher social status are more likely to have the prerequisite political attitudes," (p.339) suggesting that this group shares a common political ideology. Additionally, Neiman and Loveridge (1981) examine support for environmental issues (which are often motivations for growth controls) and argue that, "...(1) the environmental movement recruits most of its membership or adherents from the upper strata of society, and (2) the environmental

movement promotes goals and values not shared by the less affluent" (p.759). There is a prevailing belief that upper strata communities, whether through self-selection or through some sort of contagion effect, share similar values and goals and are, therefore, more able to develop coalitions of common interests.

Second, the upper strata are better equipped to mobilize because they have the resources to do so. A central focus of mobilization models within the social movement literature in sociology attempts to investigate the link between collective interests and the coordination of valuable resources (for further elaboration, see McCarthy and Zald, 1977; Jenkins, 1983). A key to understanding why collective action occurs, according to McCarthy and Zald (1977) is "...the aggregation of resources (money and labor)" (p. 1216). In addition to money and labor, upper strata communities usually are occupied by educated individuals who have the "skills" to mobilize (Burbank et al., 2000). In other words, they have the organizational know-how to coordinate their resources for effective cooperation. Guest and Oropesa (1984) maintain, "The well-to-do are apparently quite able to protect and enhance their communities...they are successful in employing whatever technique is at their disposal" (p. 839).

In summary, studies of local political participation, both at the individual and jurisdictional level, point to a social status bias. It appears that people in the upper echelon have a better grasp of the local political system and are more inclined to utilize it to their advantage. Much of the literature on local political participation follows a rational choice logic, even if it is not explicitly stated, that implies that people get involved in local politics because, "they hope to bring about policies that benefit them" (Rosenstone and Hansen, 1993, pg. 101).

D. The Anti-growth Movement

Beginning in the late 1960s in America, there was a shift from reactionary growth planning to forward looking strategic growth management in local communities. Citizens were no longer satisfied with allowing the market and traditional planning processes to dictate how land is developed. In addition, citizens were beginning to weigh the costs and benefits of growth and were becoming increasingly concerned that they were trading off quality of life and community character for growth (DeGrove, 1995). In response to these concerns, municipalities attempted to adopt new growth management strategies that provided a comprehensive plan for growth that involved restricting the rate, intensity, type and distribution of development in the jurisdiction. Many of these new plans incorporated "timing" and "sequencing" elements, which were new techniques used in order to phase in development over time (Fulton, 1999).

Initially, there was much support for growth management because it was seen as a necessary step towards alleviating the problems of growth. Seen as an effective tool to combat environmental degradation and sprawl, the anti-growth movement gained momentum among grass roots organizations across the country. Over time and through much litigation, the motivations behind growth management policies were questioned as certain groups became unduly burdened by the restrictions on growth. The growth management strategy of requiring minimum lot sizes in the township of Mt. Laurel, New Jersey, for example, was found to have exclusionary consequences by the New Jersey Supreme Court (South Burlington County, NAACP v. Mt. Laurel, 336 A.2d 713 (1975). Low and moderate-income households were priced out of the market for homes due to

inflated housing prices created by large lot zoning. In a later ruling, the New Jersey Supreme Court ordered Mt. Laurel to provide its "fair share" of affordable housing to low- and moderate-income residents (South Burlington County, NAACP v. Mt. Laurel, 450 A. 2nd 390 (1983), citing that current zoning practices did not allow for the construction of low- and moderate-income housing.

The case of Mt. Laurel, as well as other wealthy communities, utilizing growth management strategies to exclude unwanted types of development has raised concerns about the unintended consequences or the unequal distribution of the costs resulting from growth management policies (Advisory Commission on Regulatory Barriers to Affordable Housing, 1991). Over time, alternative motives have been suggested as to why municipalities adopt growth management strategies. These include motives such as keeping out expected undesirable growth as opposed to actually experiencing previous growth (Baldassare and Wilson, 1996; Hogen-esch, 2001), economic competition between municipalities (Peterson, 1981; Schneider, 1989), and maintaining status within the metropolitan hierarchy (i.e. social reproduction of urban space) (Logan, 1978; Stone, 1989). Each of these motives will be elaborated on in the following sections.

1. Growth Pressures

Traditional planning techniques, such as zoning, building standards, and height restrictions, that have worked to manage growth, have been in existence throughout the country for many decades. It was not until the 1960s that growth management, as a comprehensive planning technique that allocates when, how and where land should be

developed, came into existence. What motivated Ramapo, New York to implement this new form of growth management was evident—dramatic population growth. Ramapo's population more than doubled between 1960 and 1970 and the city's response to this population boom was to develop a growth management plan that was much more sophisticated than any other in existence. The main component of the Ramapo plan that made it unique was a "timing and sequencing" technique coupled with an approval system for residential development that was based on the amount of public facilities provided (Fulton, 1999). After a series of challenges in court, the Ramapo plan was ultimately able to withstand the charges of unconstitutionality and became the first growth management plan of its kind and the standard by which other cities modeled their own growth management plans (Danielson, 1976).

Unlike Ramapo, whose plan centered on timing and sequencing of land development, the city of Peteluma, California developed a growth management scheme with the intent to control the pace of housing development. In response to their rapid population growth in the late 1960s, Peteluma restricted housing development per year to 500 units. The Petulema plan was also challenged in court and was ruled as an appropriate use of police power by the California courts (Fulton, 1999). The ability of both Ramapo and Petaluma to withstand the legal challenges to their growth management plans set a precedent for other cities experiencing growth pressures to follow suit.

It is not just growth per se that communities resist, but how rapid growth transforms the face and quality of life of communities, or what Logan and Molotch (1987) call "use" value. Residents often attribute their vehement backlash to increased traffic congestion and commute times, air quality and environmental degradation, loss of

open space, overcrowded schools, increased housing prices and rents, and other deleterious consequences of growth. Communities around the country are questioning whether the costs of growth are greater than the promised benefits (e.g. increased revenue and jobs). Schneider (1992) examines the question, "Does growth produce fiscal benefits to communities?" He examined the effect of growth on tax rates and the tax base. He found little evidence that economic growth leads to fiscal benefits as is often espoused by growth promotion advocates. When communities did benefit economically, he found that residents were less able than the local treasury to realize the benefits because the benefits were diffuse. Apparently, the fiscal gains from growth do not trickle down to residents. Yet, it is residents that bear the disproportionate costs. It is not surprising that the membership among anti-growth coalitions is dominated by residents.

Although there has been much backlash among residents over growth, questions have been raised about whether or not the perception of rapid growth is truly reflective of real rates of growth occurring within the physical boundaries of the community. In a national survey on perceptions and attitudes towards growth, Baldassare (1981) finds that rates of local growth are usually overestimated by residents, leading him to contend, "Subjective perceptions of growth is thus a grossly unreliable measure which cannot be used to estimate actual growth" (p. 39). Although subjective perceptions of growth rates have been shown to have little relation with real growth rates, they are usually the dominant rationale in the opposition of growth and development. Furthermore, studies have shown that places that promote and support growth management policies are not necessarily those that have high past growth rates. Rather, support for growth management policies is strong when residents believe that their locality is experiencing

high rates of growth, not when they have actually experienced growth (Baldassare, 1985; Baldassare and Wilson, 1996). Other studies that have examined whether past growth rates predict growth management adoption (rather than support) find conflicting evidence. Results from Protash and Baldassare's (1983) study of northern California cities reveal that past rates of population growth were the strongest predictors of growth management policy adoption among a number of other independent variables, including percentage of white collar employees, percentage owner-occupied housing, perceived local concern for growth, and anti-growth philosophy. Similarly, Donovan et al. (1994) find that previous rates of housing construction is a positive indicator of growth regulation adoption in seven urbanized areas in Southern California (excluding Los Angeles and San Diego). Levine et al. (1996) suggest that it is regional growth rates, rather than local growth rates, that are a better predictor of growth management adoption.

These conflicting results raise uncertainty as to whether municipalities that are implementing growth policies are actually experiencing high levels of local growth. Put differently, are growth policies adopted as a reaction to actual rates of growth or are they regulations that keep out unwanted future growth? If residents are not experiencing real growth rates and the decline in quality of life that is associated with it, then why is there such strong resentment towards growth? Is it based on inaccurate perceptions of growth? Vogel and Swanson (1989) suggest that debates over growth are unfortunately ill informed and "take place without reference to empirical evidence." If this is truly the case, citizens need to be better informed about the realities of growth in their local community.

2. Metropolitan Hierarchy

The political participation literature, as discussed above, has provided substantial evidence that shows a clear class bias in who participates in local public affairs. While the emphasis within this body of work has been on individual self-interest and action, Logan (1978) posits an alternative explanation for why groups or organizations might utilize the political system to shape growth or spatial distribution. Logan believes that it is not merely class and status among individual actors (i.e. their background characteristics) that shapes spatial distribution, but rather that people and organizations, in territorially defined spaces, mobilize around their shared interests. One shared interest that binds individuals within a shared physical and political boundary, according to Logan, is the desire to maintain or improve their status advantage within the metropolitan system. This perspective underscores the importance of a jurisdiction's status within the metropolitan government structure and the metropolitan context that motivates collective action. It is not merely individual's background or social status, but the collective social standing of the jurisdiction relative to other places within the metropolitan area. The reason that groups are concerned about their jurisdiction's standing within the metropolitan hierarchy is because "people's fortunes are tied to place." Also, the local level is the political unit in which groups have the most effective influence on policies that shape their well-being. The proposition that local decisions are made in the pursuit of collective interests to maintain or improve the status standings within the metropolitan hierarchy could apply to growth decisions. Logan (1978) asserts,

> ...persons and organizations constantly seek to affect the growth process in order to maintain or create inequalities among places to their own advantage. The consequent stratification of places is therefore constructed by political action. Political, social and economic inequality among places should be understood not only as the *result* of differentiation, but also as a *cause* of the particular pattern of differentiation which evolves. More precisely, the competition among places normally reinforces the existing stratification, because initial advantages—translated into political power—can be maintained (p. 406).

The main point of Logan's conceptualization of local growth politics is his emphasis on the relative position of the municipality within the metropolitan structure. Municipalities at the top of the metropolitan hierarchy will tap into their political resources in order to maintain or improve their existing advantage. The metropolitan hierarchy conceptualization is quite similar to Hill's (1974) social status-government inequality (SSGI) thesis. The key premise of the SSGI thesis emphasizes that,

> Institutional arrangements connote the principles, procedures, and policies governing and structuring the relationships between groups in the metropolitan community. An urban stratification system consists of a bounded set of individuals, groups, and organizations whose structured interactions culminate in the allocation and distribution of scarce resources among urban residents (p. 1558).

Hill argues that fragmented metropolitan governments allow for greater residential differentiation between, yet more homogeneity within municipalities. This often results in greater inequality between places within a metropolitan region. Hill believes that advantaged homogeneous communities manipulate government powers to consciously segregate and benefit themselves at the expense of neighboring communities.

There has been very little empirical research that examines this idea that communities at the top of the metropolitan hierarchy use their political power to help maintain or advance their status within the metropolitan system. There have been studies

that have attempted to determine whether or not there is a relationship between government fragmentation (which is a measure of competition between places) and stratification. The results from these studies are mixed. Hill (1974) finds that there is a positive relationship between government fragmentation (measured as the number of municipalities per capita) and metropolitan income inequality. Logan and Schneider (1981), in a study of 1607 suburbs in 52 SMSAs, also find that, "...fragmentation of municipalities creates numerous local political interests and a competitive context which promotes the increasing stratification of suburbs" (p.185). In a later study, Logan and Schneider (1982) test the same hypothesis, measuring metropolitan inequality as the ratio of median suburban to median central city family incomes. They could not confirm what they found in previous studies, which was that, fragmented government structures contributed to rising metropolitan inequality. Using Logan and Schneider's model and expanding the number of cases, Bollens (1987) also did not find significant effects of government fragmentation on metropolitan inequality.

Studies that have tested the hypothesis that higher social status communities utilize their political power to control growth (which is believed to help communities maintain or improve their economic status) have also found varied results. Some studies that find no support for this claim (Gottdiener and Neiman, 1981), while others find weak support (Protash and Baldassare, 1983; Donovan and Neiman, 1992; Medler and Mushkatel, 2002).

3. Strategic Interaction

Although the metropolitan hierarchy perspective emphasizes the utilization of political institutions and processes for economic competition between cities, there is little discussion cities interact with one another. Moreover, how do the actions of one locality influence the action of others? Brueckner (1995) introduces a model of strategic interaction to address these questions. He argues that growth decisions must be considered within a regional context and that the growth decisions made by one city, affects other cities within the region. Thus, he suggests that cities are not only inward, but also outward looking when decisions about growth are made. Brueckner (1995) states, "...use of [growth] controls is widespread and policies appear to be chosen conditional on the choices of other cities...a change in the objective function of one city is likely to affect the choices made by all through strategic interactions..." (p.396). Strategic interaction refers to 'policy interdependence' among local government units (Brueckner, 1998).

According to Brueckner's (1995) strategic interaction model, city governments attempt to maximize total social welfare, which is a combination of city residents' (or consumers) and landowners' (who are considered to live outside of city) welfare. In this model, growth control policies restrict the development of land, which constrains the supply of both land and housing. The cost of supply restrictions is passed on to consumers in the form of higher land and housing prices, thereby decreasing consumer welfare (i.e. utility level). Supply constraints have the opposite effect on landowners' welfare; they receive the added benefits from increased land and housing prices. The net

result is an increase in total welfare, which provides government officials the needed rationale for imposing growth-controlling policies. Because jurisdictions are in competition with one another, they are vying to improve their total social welfare. Thus, if one jurisdiction imposes growth-restricting policies that improve social welfare, other jurisdictions will follow suit.

Although Peterson (1981) did not focus on the interaction between local jurisdictions, the notion that city government actions are motivated by economic competition between places was a major theme in his work. The crux of Peterson's analysis of local government processes is that cities participate in activities only if it is potentially economically beneficial. Out of the three types of policy arenas, Peterson argues that cities are more likely to participate in activities within the developmental than redistributive policy arenas. He believes that all cities must have allocational activities because these are what he calls "housekeeping" or necessary activities, such as providing police and fire services or street cleaning. Examples of these types of projects include infrastructure improvement or downtown redevelopment. These types of projects are designed to stimulate economic growth and improve the tax base of the city. In recent decades, there has been much disagreement over whether development and growth necessarily provide economic benefits to cities. A report by the Sierra Club, attempts to debunk this widely held philosophy that "growth is good" by analyzing the multitude of ways in which sprawl or rapid growth takes an economic toll on society (Sierra Club, 1998). In responding to the question, "Who pays for sprawl?" the Sierra Club (1998) responds,

> We all do. The idea that development strengthens the local tax base - a fact in the 1980s - has turned into fiction in the 1990s. Today, increases in tax revenue are eaten up by the costs to the community of delivering new services, including water and sewer lines, schools, police and fire protection, and roads for people who live far away from existing infrastructure (http://www.sierraclub.org/sprawl/report98/report.asp).

In a subsequent report, the Sierra Club (2000) outlines how taxpayers subsidize sprawl through a number of federal, state and local programs that provide incentives and monetary benefits for sprawling development. The belief that growth, especially rapid, unsightly and poorly planned growth, such as sprawl, does not pay for itself and certainly does not guarantee that economic benefits accrue to local governments has gained supporters in recent decades. Fodor (1999), for example, attempts to debunk a number of myths in order to illuminate the misconceptions about the consequences of growth. He contends that growth induces higher taxes, as evidenced by bigger cities having higher tax rates. The reason for this is that as cities develop and population increases, cities must provide the necessary infrastructure and public services (i.e. police and fire protection, schools, trash collection), which usually involves large capital outlays. Fodor also disagrees with the widely held belief that growth leads to higher employment rates. He argues that job growth does not guarantee that residents of the locality experiencing the job growth will receive those jobs. Instead, he suggests that employment growth will attract migrants to the area, thereby increasing the competition for jobs and the need for even more jobs.

The point of this argument is that although most scholars would agree with Peterson's assertion that local government decisions are heavily influenced by economic incentives and the fiscal considerations, there is much controversy about whether it is

pro- or anti-growth policies that will provide greater economic benefit for localities. While a large majority held strong beliefs in the past that pro-development policies provide added fiscal benefits to localities, recent studies have proven otherwise (Schneider, 1992).

The skepticism over the monetary gains from growth has been especially strong in California after the passage of Proposition 13 in 1978. The passage of Proposition 13 altered the tax structure of local governments, causing a massive reduction in revenues that result from property tax and elevating the importance of sales tax in providing revenue for necessary public services. Under Proposition 13, property tax is capped at one percent of assessed value and properties are only reassessed at market value once the property is sold. If the property is not sold, the assessed value of the property can increase no more than two percent annually. In addition, the only way to change the property tax rate is by a two-thirds approval by citizens (Fulton, 1999). The limitations to how much local government can garner from property tax and their inability to increase rates in times of fiscal necessity creates challenges to raising revenue. It is natural that local governments in California have placed more energy in attracting retail businesses, which provide sales revenue, than developing housing, which creates a net loss in revenue when the costs of public services are subtracted from property tax revenues.

In California, therefore, growth policies that restrict residential or non-retail development may be more economically advantageous to municipalities.[3] This argument is consistent with the logic of the strategic interaction perspective as posited by Brueckner. Brueckner would agree that jurisdictions adopt growth-restricting policies as

a response to competing jurisdictions growth restricting activities due to the need to be economically competitive and to guard against unwanted growth that spills over from other jurisdictions. Using a spatial lag model to test for strategic interaction among 173 California cities that have adopted at least one growth management measure by 1988, Brueckner finds that there is "convincing evidence of strategic interaction" (p. 462). In addition, cities that have higher populations, education and skill, property values, and are more liberal, tend to have more stringent growth restrictions.

E. Symbolic Politics or Real Effects? The Effects of Growth Management on Housing and Socioeconomic Change

Although traditional land use regulations, such as zoning or subdivision regulations have been around for a long time, more elaborate growth management schemes have become popular only in recent decades. The main attraction to growth management and the rise in the number of local jurisdictions adopting them can be attributed to a shift in growth perspective. Until the early 1970's, the prevailing perspective among local jurisdictions was that growth is always good and the more growth, the better. Growth was associated with economic prosperity and better opportunities. The shift from a pro-growth to anti- or slow-growth perspective came as a negative response from grass roots organizations to urban sprawl and environmental degradation. On a larger scale, there was a growing realization among residents and local officials that the costs of growth were vastly outweighing the benefits (DeGrove, 1995).

What was once believed to be a predominantly wealthy elite suburban phenomenon--controlling growth--became a universal theme in all types of cities.

In California, for example, citizens from jurisdictions all over the state have cast their votes to adopt a variety of local growth management measures (Fulton et al., 2002). This has left little doubt regarding the pervasive support for growth management among voters throughout the state. What is less understood is the effect that these growth management policies adopted by voters at the ballot box have on actual outcomes to growth, such as population and housing. In other words, when voters participate in the political process, does their voice make a difference? There are different answers to this question depending on one's perspective on growth dynamics of the city. Some scholars would argue that the city is an engine for growth promotion with a powerful pro-growth constituency (business elites and local officials) and that growth will prevail no matter if citizens resist it (Molotch, 1976; Peterson, 1981; Warner and Molotch, 1995). Thus, the economic imperative more often than not wins out. Pitted against this line of thought are those that believe that citizens are able to mobilize, negotiate with diverse actors involved in making growth decisions, and use 'voice' in order to obtain their desired outcome (Hirschman, 1970; Elkin, 1987; Stone, 1989). For these scholars, actors, politics, and the political process play an intricate role in shaping growth dynamics.

This next section will determine whether citizen enacted growth management policies are effective in doing what they propose to do—slow down growth. An analysis of the changes to housing and socioeconomic growth and characteristics due to the adoption of citizen enacted growth management policies will be examined. If growth management policies are not effective in achieving what they are intended to, is it true

that the 'power to build' prevails regardless of citizen actions and that politics do not matter? Is direct democracy is merely symbolic politics, a means to pacify discontent citizens?

1. The Effects of Growth Management

Wong's (1988) political choice model raises awareness that urban policies are a culmination of both economic and political processes. Understanding the interplay between these processes is especially pertinent in explaining how growth management affects housing and socioeconomic growth. Applying Wong's model to growth management policies suggests that while economics provides the structure within which housing and population dynamics function, powerful political actors pursuing their interests can interrupt or change the way in which these dynamics play out by mobilizing for and adopting growth regulations. To better illustrate how this works, a look at the literature on the effect of growth management policies on housing prices will be discussed.

Much of the focus on outcomes due to growth management has centered on housing price effects for single-family homes. This is partly because of the inequities claimed by residents and policy analysts that growth management policies have caused housing prices to increase at a faster pace than personal income (Lillydahl and Singell, 1987), thereby making homeownership more difficult for some and elusive for others (Pendall, 2000). Furthermore, it is charged that growth management encourages a bidding war for lower-end starter homes, which benefits current homeowners, but penalizes

households who would like to enter into the housing market (Branfman et al., 1973; Lillydahl and Singell, 1987; Fischel, 1990). Another reason for the emphasis on housing price outcomes within the growth management literature is due to the availability of housing sales data. Housing sales data have been available through the real estate industry and has detailed information about characteristics of housing structures, which is useful in hedonic regression models. Due to these factors, there has been much interest on the effects of growth management on housing prices; therefore, this literature will be reviewed.

a. Growth Management Shifts Supply and Demand

Growth restricting policies that affect housing prices can result from either a shift in supply or demand of housing. Empirical studies that examine the effects of growth management on housing prices sometimes do not explain the mechanisms that create the shift in prices (Mayer and Sommerville, 2000). In other words, does growth management inhibit supply or increase demand for housing? To what extent does the lower supply or higher demand affect housing prices? Economic theory posits that there are several key ways that growth management can inflate housing prices. They include: 1) restricting supply; 2) raising costs for developers; 3) increasing demand; and 4) improving amenities.

The most common way in which growth management restricts the supply of housing is by reducing the amount of developable land. Growth management policies can eliminate developable land by zoning it for special purposes, such as open space, or

by making it more difficult to develop by creating higher standards for project approvals, such as requiring environmental impact reports or adequate infrastructure (Priest et al, 1977). Either way, growth management works to limit the availability of developable land, which translates into fewer houses being built and potentially higher housing prices.

Restricting supply of developable land does not necessarily lead to higher housing prices. Rather, the price effects on housing are dependent on the elasticity of supply (Priest et al., 1977; Fischel, 1990). Theoretically, if supply is elastic (e.g. there are good substitutes), then there should be no effect on housing prices within the growth-controlling jurisdiction. One way to substitute for the developable land that is eliminated by growth management policies is to allow for density bonuses. For example, when Portland implemented a regional UGB, they also allowed jurisdictions to increase their building densities within the UGB, thereby using the available land more efficiently. As a consequence, there was no noticeable decline in the number of housing units built after the implementation of a UGB (Phillips and Goldstein, 2000). Another form of housing substitution is possible if neighboring jurisdictions absorb the housing development that would have occurred in the growth-restricting jurisdiction. If housing development occurs in neighboring jurisdictions to meet the demand for housing, then housing prices within the growth-restricting jurisdiction should not be affected. To illustrate, if there was no difference in housing prices between a city with growth management and a neighboring city that does not have growth management, this may be a result of spillover growth. Housing prices did not rise in growth management city because the city without growth restrictions produced more housing to meet demand, therefore, providing

substitutes for those people who would have wanted to live in the growth management city. As a result, this kept housing prices in the growth management city from escalating.

If, on the other hand, supply is inelastic, then housing prices will inevitably rise. Supply is generally more inelastic in desirable locations (e.g. coastal or resort communities), where housing cannot be substituted because it is the location, not the housing structure, that is the desirable amenity. Supply could also be inelastic if all neighboring jurisdictions also have growth restrictions or already built out, thus not allowing any spillover development. Another reason for inelastic supply may result from the clustering of growth management cities, therefore, making it difficult to find alternate places to build. Shen's (1996) study of growth controls in the San Francisco Bay region finds growth controls have the desired effect of reducing population and residential development, while also causing development to occur in outlying areas of the region. He explains that development occurred in "distant cities instead of adjacent" cities due to the clustering of growth controls.

It is not just restrictions on developable land that escalates housing prices, but also construction delays due to regulation or uncertainty about project approvals. Feitelson (1993) illustrates the role of developer costs and expectations on land prices in. He shows that land use controls directly affect both developer costs and developer expectations (or uncertainty), which in turn, effects development decisions. Consequently, development decisions influence the price of land. There are a variety of ways in which delays or uncertainty can arise in development projects. Residents can protest against new unwanted development (e.g. 'Not In My Backyard' inspired protests) or adopt new development specifications. When issues such as these arise, they are

prime examples of how the political process intersects with the supply of housing. The availability of adopting regulations by citizen initiative is another method that may create development delays and increase construction costs. If a ballot measure is expected to be placed on a ballot that may alter or create additional costs to future development, developers may delay construction until the ballot is voted on. Or, if the ballot measure passes and developers must adapt their development or construction process in order to accommodate the new adopted policy, this may lead to fewer housing being constructed and/or higher housing costs.

In a study of 63 Ohio cities that qualified zoning referenda, Staley (2001) finds that cities that placed zoning measures on the ballot, regardless of whether they passed, had lower rates of housing growth. Thus, he argues that the potential for citizens to adopt zoning measures through the political process (i.e. ballot box zoning) that alter development creates a level of uncertainty for developers, which results in fewer numbers of housing units built. Staley (2001) explains that, "Risk and uncertainty are key elements of transaction costs related to property development," (p.27) which factors into the price of housing. Mayer and Somerville (2000) come to similar conclusions in their analysis of regulations effect on housing new construction in 44 metropolitan areas from 1985-1996. Their study finds that a one month delay in receiving a subdivision approval amounts to roughly a 20-25% reduction in the total number of building permits allocated. They suggest that regulations slow down development because developers pay in delays and additional costs in order to navigate the regulation process. Also, the uncertainty that is created by the regulation also contributes to higher costs for the developer. The results from these studies and others (Logan and Zhou, 1989) come to a general consensus that

regulations that create delays or uncertainty in development are likely to raise housing prices, which are passed along to the consumer. In addition, these studies suggest that regulations adopted through the political process politics can effectively alter the market for land and housing, thereby changing the economic dynamics of the market.

There are fewer studies that examine the demand side effects of growth management than those that look at the supply side. This is probably because it is more difficult to measure the effect that demand has on price due to growth management. If growth-restricting policies function to increase the desirability of a locale, the amenity improvements should also be reflected in the price of housing. Navarro and Carson (1991) assert, "...the extent that growth controls result in the reduction of expected negative externalities and/or congestion costs associated with growth, controls may also produce amenity effects that likewise will be capitalized in land values (and wages)" (p.128). Amenity effects due to growth management may come in a variety of different forms. There are amenities effects that apply to the structure of the housing unit, such as better roof or plumbing. Some amenities are attributable to the neighborhood in the form of a more consistent design or better design standards for the entire neighborhood. Finally, there are regional amenities, such as providing more parks, roads, schools, recreational centers, or simply a better planned and livable region. All of these amenities can be a result of growth management policies and may be capitalized in the price of housing. Navarro and Carson explain that these amenity affects usually occur in concert with a reduction in supply, thereby making it very difficult to tease out how much of housing price increases are due to supply reductions or amenity improvements. They suggest that it is important to examine benefits, as well as, costs when measuring the

effect of growth controls. This advice is often times neglected due to the difficulty of deciphering all the costs and benefits (Nelson et al., 2002).

Growth management not only has the potential to increase demand, but can also reduce demand for housing by limiting the number of people occupying units or restricting the type of households, such as families versus single people. These types of policies that decrease demand would deflate the price of housing (Lillydahl and Singell, 1987). These types of controls appear to be fairly uncommon. Another way in which growth controlling policies can decrease demand to live in a specific locality is if the policy makes the jurisdiction a less attractive place to live. For example, restrictions on commercial or industrial development may stunt employment growth. Lower levels of available employment opportunities may make a jurisdiction less desirable to live in, thus decreasing the demand for housing and lowering housing prices.

b. The Social Consequences of Growth Management

While the goal of growth management is to improve the quality of life for residents within the jurisdiction, the consequences of growth management may disproportionately disadvantage some individuals more than others. When growth management raises the price of for sale housing, for example, this benefits homeowners, but penalizes renters or households living elsewhere who may want to enter into the housing market in the growth management jurisdiction. Malpezzi's (1996) study of regulations[4] in U.S. metropolitan areas finds that the difference between a highly regulated and a lightly regulated metropolitan area is a 10% reduction in homeownership

rate. He attributes the lower rates of homeownership to higher housing prices caused by greater regulation. Some scholars suggest that land use regulations impose costs well beyond the benefits that are accrued. Luger and Temkin (2000), for example, argue that many regulations impose "excessive" costs. They analyze the direct costs of land use regulations in North Carolina and New Jersey and find that when demand for housing is fairly inelastic (i.e. there are no substitutes), excessive land use regulations may tack on an additional $40,000-80,000 per new home. Skyrocketing housing prices, which is associated with rising rents, disproportionately disadvantages low-income households. In many urban areas, low-income households are minority households; therefore, these populations are more detrimentally affected by higher housing prices.

Inflated housing prices are not the only factor which preclude low-income and minority households to live in growth management jurisdictions. Growth management can also limit the types of housing units that low-income residents and minorities would afford to live in. That is, growth management can reduce the supply of apartments, attached housing (e.g. condos and townhomes), and affordable housing (e.g. trailer park homes) that would be occupied by low-income and minority residents. The Mt. Laurel court cases in New Jersey provide a prime example of how land use regulation, in this case, large lot zoning, resulted in fewer affordable housing units built (Danielson, 1976). Pendall (2000) illustrates a causal pathway by which land use controls can lead to racial exclusion. He hypothesizes that land use controls lead to slower growth, a shift from multi-family to single-family housing, a reduction in rental units, and lower rental affordability. In turn, these factors increase the chances of racial exclusion. This causal pathway is what he calls, "the chain of exclusion." His study of 1,510 jurisdictions in 25

of the largest metropolitan areas in the U.S. finds that jurisdictions with low-density zoning had significantly lower concentrations of both Black and Hispanic populations, while places that adopted building permit caps and urban growth boundaries had fewer Blacks (but not Hispanics). In addition, the results reveal that places that have low-density zoning, building moratoria, UGBs, and building permit caps in effect were also associated with lower rates of growth in Black and Hispanic populations over time. Pendall (2000) also found that some land use regulations influenced the type of housing developed (i.e. more single-family and fewer multi-family), therefore, also resulting in exclusionary racial effects.

Evidence for the chain of exclusion is also found in a study of local growth-controls adopted in California between 1979 and 1988. Levine (1999) tallies all growth control policies enacted (out of a total of 18 different types) in California cities and counties to determine if there are differences in housing and population in growth control compared to non-growth control jurisdictions. Examining housing effects, Levine finds that jurisdictions with growth controls had roughly 404 fewer units per growth control measure enacted, higher median rent, and increased home values. Growth controls are associated with a smaller increase in total non-white persons (2218 per growth control measure enacted) and also a smaller increase in American Indian, Black, and Hispanic populations in growth controlling jurisdictions. Levine attributes the lower rates of growth in the non-minority population as mainly an effect of growth controls reducing the number of rental housing units because "Lower-income and minority populations tend to concentrate in rental housing" (p.2065).

If low-income and minority populations are excluded from growth controlling jurisdictions there must also be evidence of income and racial residential segregation. There are a number of studies that find a link between growth management and segregation. In their study of 416 suburbs, Logan and Zhou (1989) find that environmental zoning regulations inhibit blacks from moving to the suburbs. They contend that, "...environmental impact statements, perhaps by increasing the time required for project reviews, raise housing costs [in the suburbs]," (p. 466) which leads to fewer Blacks being able to afford to live there. Similarly, Shlay and Rossi (1981) find that more restrictive suburban zoning leads to greater income segregation by increasing housing prices. Both of these studies, along with the results from studies reviewed by Schill and Wachter (1995) draw the general conclusion that segregation is indirect related to growth and/or land use regulations via housing prices. This non-random and systematic segregation by income and race raises questions regarding equity due to the deleterious consequences of concentrating low-income and minority populations. Branfman et al. (1973) assert that income and racial concentration (or what they call 'clustering'), "...is seen as a symptom of social disorder, as an indication that constitutional norms are being violated, and as an obstacle to the realization of widely held public policy goals" (p.483). Unlike the above studies, Malpezzi (1996) finds no relationship between stringency of regulation and segregation at the metropolitan level.

Even though segregation may be an indirect, not a direct, effect of growth regulations, understanding the extent of the relationship and the potential disadvantages that may accrue to low-income and minority populations should be of concern to those who support and implement growth management policies. It may be difficult to

undercover any intentional income or racial discriminatory motivations for growth regulations because support for growth management is often disguised under the banner of fiscal concerns (a better tax/service ratio), environmental or agricultural protection, sprawl elimination, or negative externalities, in general. Although the motives may be difficult to uncover, the disproportionate effects on certain populations appear to be evident. The question that this study seeks to answer is whether growth management adopted by voters disadvantages a select group of households (low-income and minorities) by limiting their jurisdiction of residence. Fischel (1990) argues that growth managements passed by the electorate are more likely to place a greater burden on a select group of people in the community, because "Measures that provide a small benefit for a large number of voters and impose a large cost on an isolated group of citizens are more likely to pass in a plebiscite than in a legislature...Growth managements adversely affect a relatively small number of voters in a jurisdiction---landowners and business interests—while providing financial gains or community amenities to a large number of existing residents" (p. 54).

c. The Spatial Consequences of Growth Management

As previously discussed, spillover of development from one jurisdiction to another is one potential spatial consequence of growth management. Spatial consequences, such as spillover and others, including income or racial segregation (which also has social consequences, as discussed above) and sprawl, can create a disamenity for the region. For example, when spillover development takes place in cities adjacent to

cities with growth management, housing prices in these adjacent cities may rise. The reason for this is that demand for housing in adjacent areas increases because households are not able to find housing in the jurisdiction with growth restrictions (due to fewer units or higher prices). Pollakowski and Wachter's (1990) analysis of the effect of zoning restrictions on housing prices in Montgomery County finds that neighborhoods that areas that are located adjacent to restrictively zoned neighborhoods experience an increase in spillover demand. This results in higher single-family home sales prices in these adjacent neighborhoods. Another regional disamenity of spillover due to growth management is increased travel time to work and traffic congestion. This may result in lower quality of life for residents over the long-run because more of their time is spent in unpleasant traveling conditions (Fischel, 1990).

The amount and extent of spillover that results from growth management is highly related to levels of sprawl. Fischel (1990) suggests that growth management causes development to be more spread out than would be in its absence. He asserts,

> My claim is that such local ordinances cause developers to go to other communities. The most likely alternative sites are in exurban and rural communities, where the political climate, at least initially, is more favorable to development. As the more rural communities become partly developed, the newcomers wrest the political machinery from the pro-growth farmers and business interests. Then these communities, too, adopt growth controls, sending development still farther from the employment and commercial centers. Eventually, employment and commercial activities also disperse from traditional population centers as they find that employees and customers are harder to find (p. 55).

Although Fischel does not test his claim, others have found evidence that land use restrictions and growth management have indeed contributed to greater outward expansion of development. In the San Francisco Bay Area, growth restricting cities are

found to be clustered together, thereby causing growth to move out beyond the boundaries of the cluster of growth restricting cities and farther out on the fringes (Shen, 1996). Pendall's (1999) study of land use restrictions on levels of sprawl, which he measures as persons per urban acre, reveals that land use controls contribute to lower density development. He found that low-density-only zoning and building permit caps were significantly associated with sprawl. For example, his finding reveals that, "for every additional 10% of land occupied by jurisdictions with [building] permit caps, the average density dropped by 30 new people per 100 new urban acres" (p.563). While Pendall measures sprawl as low-density development, evidence for sprawl occurs when development occurs in a 'leapfrog' pattern whereby development does not occur in a continuous outward pattern, but instead leaps over undeveloped areas. Priest et al. (1977) found patterns of leapfrog development that resulted from growth management policies in San Jose, CA. He argues that growth management in San Jose influenced developers to jump over agricultural lands, open space, and land reserved for future development to construct housing in Gilroy, Morgan Hill, and other rural areas. What resulted was dramatic increases in sprawl and commute times. The findings from these studies suggest that land use controls and growth management have encouraged development to move farther and farther out onto the urban fringe and beyond. This is ironic considering that advocates for the first growth management plans hoped to alleviate sprawl.

2. Differential Outcomes by Growth Management Tool

There is evidence to believe that not all policies that fall under the umbrella of growth management have the same outcomes on actual growth. Because growth management is such a broad category, it encompasses many different types of strategies. Some of these may be more likely to restrict growth than others. For example, housing/population caps, commercial/industrial caps, and large-lot or low-density zoning, which are considered more blunt growth restrictions may have a greater effect on reducing population and housing growth than other growth management tools. On the other hand, policies, such as adequate public facilities requirements and urban growth boundaries may redirect growth, while having a smaller effect on reducing overall growth. In fact, Nelson et al. (2002) suggest that the sheer number of growth management regulations within a jurisdiction is less important for outcomes than the type of regulation. They find that regulations that restrict available land or place a cap on housing, without providing other ways to compensate for the loss in housing (e.g. building density bonuses), have a dramatic effect on housing affordability.

Studies that compare the effects of various types of growth management on either housing or population growth finds much variation across growth management types. Landis et al. (2002) examine five different types of growth management measures enacted in California cities: residential caps, residential APFOs, urban growth boundaries/urban limit lines (UGBs), annexation limits, and voter-enacted super-majority approval requirements (vote requirements). Comparing cities that have adopted these growth management measures to "matched" cities that have not, they find that cities with

residential caps, annexation limits, and vote requirements have lower rates of population growth between 1990-2000 than their matched cities. In addition, their analysis shows that cities with annexation limits have much lower housing unit growth than their matched cities. These results also reveal that there is no difference between cities that adopt UGBs and residential APFOs and their peer match cities, which suggests that these types of regulations, "...limit the spatial growth of cities that adopt them, but not necessarily the numerical amount of growth" (Landis et al., 2002, p. 19).

Levine (1999) analyzes the effect of eighteen different types of growth control measures on housing unit growth between 1980-1990 and finds that only 4 of 18 measures had a significant effect on housing unit growth. These four measures all related to decreasing the intensity of land use and they include: rezoning of land from residential to agricultural use, rezoning commercial/industrial zones to less intense use, reducing densities by general plan or zoning, and reducing permitted heights of commercial/office buildings. Cities having any one of these four measures had 3,444 fewer housing units, on average, than cities that did not. Levine's study suggests that of the eighteen growth management strategies that he examined, those strategies that related to downzoning had a very strong effect on housing growth. Pendall (2000) also found that low-density or large-lot zoning significantly reduced housing supply.

There are not only differences in rates of growth depending on the growth management type, but also differential effects on housing and population composition. Growth management measures that relate to rezoning land to less intense uses (i.e. downzoning) are found to be associated with lower rates of rental and multi-family housing (Levine, 1999; Pendall, 2000). These are the types of housing that are occupied

by lower-income and minority housing. Thus, it is not surprising that zoning regulations used to downzone properties is also related to lower growth in minority populations. Logan and Zhou (1989) found that environmental zoning was negatively related to blacks living in the suburbs. Pendall (2000) finds that low-density-only zoning gave rise to lower concentrations of Hispanics and Blacks. He also found that metropolitan areas with building permit caps and UGBs had smaller concentrations of African-Americans (but not Hispanics). It is apparent that not all growth management tools have the same effects on housing and population outcomes and that it is important to discern the differences between them in order to better understand their costs and benefits.

F. Background: Growth Management Politics in California

In California, the politics of growth dominate the local political landscape. This is no surprise considering California is the most populous state in the union and continues to add the largest number of people year after year. The rapid population growth coupled with periods of economic downturns in the last few decades and municipal fiscal crises have intensified the problems associated with local growth (Department of Housing and Community Development, 1998). Additionally, the decisions about growth management are delegated to local jurisdictions in California and put in the hands of the state, as in other places, such as Florida, Oregon, and Washington. The decentralization of power over growth and land use coupled with the large number of growth related ballot measures creates a very distinct system of growth management, one that arguably makes growth planning more fragmented, contentious, and political, than otherwise would be.

Although twenty states in the U.S. allow citizens to propose and adopt land-use or growth related issues at the ballot box, no other state comes close to using the ballot box as often as California. The rising popularity of the ballot box and its increasing usage by municipalities to manage growth has given cause for some observers to remark that there is a "ballot box revolution" occurring in the state (Caves, 1992). This revolution has spawned over 1,000 estimated ballot measures relating to land use in around the state, many of which relate to growth management (Nguyen and Fulton, 2002), and signal a radical change in the ability of citizens to become involved in growth politics and related decisions.

Why do voters in California take growth management to the ballot box? Part of the explanation may be due to the rising levels of distrust in government among citizens in California. Ballot box initiatives are a form of direct democracy, whereby citizens can bypass elected officials and adopt legislation on their own. Direct legislation provides quick remedies for discontented citizens who may feel that too little is being done by local government to curb growth and the detrimental consequences associated with growth (Baldassare, 2002). In a survey on growth related matters, Californians were asked who they believed should make land use decisions. An overwhelming percentage of Californians (77%) responded that voters, as opposed to elected officials, should make these types of decisions. The survey also revealed that among the different forms of political participation, which include attending citizen meetings, public hearings, and writing to public officials, the most common form of participation for growth related matters among Californians is voting at the ballot box. Roughly 47% of individuals surveyed said that they have voted at the ballot box and 41% responded that they have

signed a petition that was related to a land use issue (Public Policy Institute of California, 2002). There are a number of inferences that can be made from these results. First, the use of the ballot box, relative to other methods, has become a popular tool that citizens can use to shape land use decisions. Second, the increasing level of participation at the ballot box signals a growing confidence among citizens that this is an effective way to adopt land use policies. Finally, the growing number of ballot box measures may be due to citizens voicing their dissatisfaction with how their elected officials or city administrators are handling land use matters. They are perhaps losing faith in those who they have trusted to represent their needs and interests (Baldassare, 2002).

1. Bottom-Up Growth Planning

The federal government in the U.S. plays a very small role in shaping land use and managing growth at the local level. The federal role is usually through indirect means, such as environmental regulations (e.g. National Environmental Protections Act, Endangered Species Act) or restrictions on use of federal. State governments, on the other hand, can have varying degrees of influence on land use and growth management. Some states, such as Hawaii, have a centralized system that requires that local governments implement the state's growth management plan and allows little freedom for local governments to shape local land use and growth processes (DeGrove, 1995). If the level of state involvement in local growth management were placed along a continuum, California's growth management system would be at the opposite end of the spectrum from Hawaii's.

Phrases such as "extremely decentralized" (Fulton et al., 2002) and "non-interventionist bottom-up planning" (DeGrove, 1995) have been used to describe California's growth management system. Although the state government provides some guidelines, the actual planning and implementation of growth management strategies in California is left in the hands of local government. The state's general plan requires that local governments develop a local general plan that includes seven elements: circulation, conservation, land use, housing, noise, open space, and safety. These elements are intended to provide information about current conditions and future planning in local jurisdictions. For example, the housing element, requires an assessment of local housing needs, for every income category of households within the locality, and plans on how to provide adequate housing (Fulton, 1999). Unfortunately, there is no mechanism at the state level to ensure that local governments carry out their own recommended policies as outlined in the housing element (Lewis, 2003), as is true of the other elements as well. Therefore, if a jurisdiction found that it needed more low- and moderate-income housing to meet the needs of the current residents, but fails to provide it, there is no penalty imposed by the state. In order to get a jurisdiction to comply with its housing element, citizens or interest groups must litigate compliance through the judicial system. The court system is the only recourse to attempt to get jurisdictions to comply. The lack of enforcement for carrying out what is written in the general plan allows local jurisdictions great autonomy in dictating how growth occurs within its own borders.

This autonomy often results in uncoordinated or fragmented growth planning between local jurisdictions in the state. DeGrove (1995) asserts, "The end result is that local general plans often work at cross-purposes, dealing with growth issues effectively

in one jurisdiction while ignoring problems created in neighboring jurisdictions" (p. 29). For example, detailing the growth management system in the San Francisco Bay Area, Shen (1996) maintains,

> There are no federal or state laws that would effectively prevent local jurisdictions from attempting to pursue their self-interests at the cost of others. Therefore, instead of pursuing coordinated growth management, many municipalities simply enact growth-control policies that appear to serve their own interests best (p.64).

Another factor that contributes to the fragmentation of growth planning in California is the frequent use of the ballot box to adopt growth policies. California qualifies more local land use and growth management ballot measures than any other state in the union. No state even comes close to utilizing the ballot box for these types of issues as often as California (Nguyen and Fulton, 2002). Ballot initiatives and referenda are usually intended to address one topic, such as housing, infrastructure, or urban growth boundaries. Rarely do ballot initiatives and referenda provide comprehensive planning (except when adopting a new general plan). As a result, there has been concern that managing growth at the ballot box contributes to the fragmentation of planning, not just between, but also within jurisdictions.

Both the nature of state level involvement (or lack thereof) and the ability of citizens to qualify and adopt initiatives and referenda reflect a growth management system that is run from the "bottom-up." Without a statewide growth management plan or more enforcement of growth policies by the state, California's system of growth management remains largely a product of the decisions made by the cities and counties that make up the state.

G. Summary

The availability of the ballot box process elevates the power of citizens to shape and direct growth and development within the boundaries of their city. Although there has been much speculation as to why citizens are resorting to the ballot box to make growth decisions, there has been very little empirical research on this specific matter. In order to gain a better understanding of this phenomenon, this chapter merged two bodies of literature. The first relates to political participation. Since the ballot initiative process requires citizens to be active participants in the political process, it is pertinent to investigate which citizens are more likely to participate in local politics and what types of communities are capable of mobilizing around local growth issues. The second body of literature focuses on why communities choose to manage growth. Are they driven to protect their community from rampant growth or are they maintaining their status within the metropolitan hierarchy? Another explanation might be that they cities react to the growth management strategies found within their region. These explanations are discussed in this chapter.

This chapter reviews the literature on the outcomes of growth management on housing and population growth. It is evident that the goal of growth management is usually to slow the pace or stop specific types of growth, there are unintended consequences of growth that raise concerns about equity. This chapter takes time to discuss the effects that growth management has on: housing prices; shifting supply and demand of housing; discouraging multi-family, rental, or affordable housing development; excluding lower income and racial/ethnic minority populations; housing

spillover; sprawl; and residential segregation. These issues only touch the surface of some of the social and spatial consequences of growth management.

Finally, this chapter also provided a more focused look on growth politics in California and provided an in-depth look at the state's growth management system. Growth management is California is largely a decentralized process that allows local jurisdictions much flexibility in making land-use and growth decisions, what some call 'non-interventionist bottom-up planning" (DeGrove, 1995). What sets California apart from most states is the prevalence of the local citizen initiatives and referenda for growth management issues. Those who are proponents of this system argue that it provides a checks and balance for local government, but those who oppose it criticize it for making the planning process more fragmented and contentious.

ENDNOTES

[1] This policy arena typology was developed by Lowi (1964), but has been subsequently adopted by other scholars interested in urban politics, such as Peterson (1981).

[2] Initially, the model included two indicators of satisfaction. The first is a measure of individual satisfaction with their local government in the past (PRIOR DISSATISFACTION). The second measure captured current levels of satisfaction with local government (CURRENT DISSATISFACTION). When both variables were placed in the model, problems of multi-collinearity were present. Therefore, the authors constructed a measure that combined both past evaluations of dissatisfaction with current (RELATIVE DISSATISFACTION).

[3] This is often referred to as the "fiscalization of land-use." For more information on this topic, see Misczynski (1986), Fulton (1999), and Lewis (2001).

[4] Regulation is measured as an additive score of all regulations relating to rent controls, land use and zoning, infrastructure, and building and subdivision codes. Malpezzi developed a more sophisticated measure of regulation using factor analysis, but found that the factor scores were "highly correlated with the simple additive scales," and, therefore, decided to only report the results for the simple additive scales.

Table 3.1: Measurement of Growth Management by Study

Author(s)	Year	Data and Methods	Measure of Support for Growth Management	G vs. S*
1. Medler, J. and Mushkatel, A.	1979	Voting data from the state of Oregon's Measure 10 in the 1970 election, merged with city and county census data and A 1977 survey of Eugene, Oregon residents (~ 929 residents)**	Pass or failure rate of Measure 10, a measure to repeal an existing statute, at city and county levels that requires land-use planning by all local jurisdictions and "Do you believe the City of Euguene should attempt to limit the growth of population in Eugene?"	S G
2. Gottdiener, M. and Neiman, M.	1981	A 1979 mail survey of 435 registered voters in Riverside, California	Vote cast for Measure R, an initiative to preserve agricultural lands from urban sprawl	S
3. Neiman, M. and Loveride, R.	1981	A suvey of 459 voters that voted for Riverside, California's Measure B in the 1977 election	Vote cast for Measure B, a measure requiring adequate public services before grading and building permits are approved and also attempts to preserve agricultural and undeveloped lands and "The city of Riverside should attempt to retain agricultural lands like orange groves" and A general question asking about respondent's feelings about the city's growth and development policy	S S G
4. Protash, W. and Baldassare, M.	1983	A 1978 survey of 97 California planning agencies, which covers 184 municipalities	Additive measure of how often density measurements are used in land-use planning	S
5. Baldassare, M.	1985	A 1982 telephone survey of 1,009 Orange County, California residents	"Do you think that growth and development in your city should be limited?"	G

* G=General and S=Specific Measures of Growth Management

**The authors do not explicitly state what the sample size was for their survey of Eugene, Oregon residents, but the sample size is deduced by adding up the sample size for the variable 'Years of Residence in City' in Table 2 on p. 347.

Table 3.1 Cont.: Measurement of Growth Management by Study

Author(s)	Year	Data and Methods	Measure of Support for Growth Management	G vs. S*
6. Connerly, C.	1986	A 1985 telephone survey of 1,010 Floridians age 18 and older	Percentage of respondents who feel that growth should be limited or stopped and Additive index of four specific measures relating to costs of growth management and Additive index of three specific measures relating to attitudes towards apartment/condo construction, providing adequate public services, and preservation of natural areas	G S S
7. Green, B. and Schreuder, Y.	1991	Data from zoning applications in the city of Wilmington, Delaware	A community support index constructed by calculating the amount of support for upzoning applications	G
8. Glickfeld, M. and Levine, N.	1992	A 1988 survey of California 386 city managers and 57 county administrators	An additive index of how many (out of 14) different types of growth management measures are enacted within each jurisdiction	G
9. Donovan et al.	1994	A 1988 mail survey of 147 city planning officials in Southern California (excluding Los Angeles and San Diego)	Additive measure of growth control policies found in each city	G
10. Levine, N. et al.	1996	A 1992 survey, which is a follow-up of the 1988 survey of California city managers and county admisistrators. This was a survey of 410 city managers and 55 county administrators	An additive index of how many (out of 18) different types of growth management measures are enacted within each jurisdiction	G
11. Baldassare, M. and Wilson, G.	1996	Telephone surveys of Orange County, California residents in 3 different years: 1982, 1991, and 1993. Roughly 1000 adults surveyed in each survey year.	Answer to the question: "Do you think that government regulations in your city or community aimed at controlling growth are too strict, about right, or not strict enough?	G

* G=General and S=Specific Measures of Growth Management

**The authors do not explicitly state what the sample size was for their survey of Eugene, Oregon residents, but the sample size is deduced from taking adding up the sample size for the variable 'Years of Residence in City' in Table 2 on p. 347.

IV. RESEARCH DESIGN

This dissertation research focuses on the use of the ballot box to manage growth in local jurisdictions in California. This research is designed to test four competing hypotheses as to why cities qualify and adopt growth management ballot measures. It also examines the effects of qualifying and adopting growth management at the ballot box on housing and socioeconomic change. The research questions, conceptual model, hypotheses, data, and methods are described in this chapter.

A. Research Questions

There are two broad research questions that will be examined in this dissertation. The first concerns the motivations for citizen mobilization and adoption of local anti-growth policies. There are a number of competing hypotheses regarding why citizens mobilize and support growth management. While there have been studies that examine individual hypotheses, this study will test four of the most common explanations for growth management enactment in order to evaluate which hypothesis has better explanatory value. A related exploratory analysis will look more specifically at whether different specifications and definitions of growth management (i.e. different growth management tools) have an effect on citizen mobilization and support. This analysis will determine whether some hypotheses better explain the adoption of different growth management tools.

The second broad research question relates to the consequences of citizen adopted growth management policies. Do growth management policies adopted by voters have a negative effect on local housing growth, as they are intended? If so, do these growth management measures also influence socioeconomic compositions? These questions address the notion that growth management may have exclusionary effects on minorities (indirectly) by reducing housing supply and also shifting the supply of housing away from multi-family and rental housing.

1. Conceptual Model

An evaluation of the literature identifies four possible explanations for why citizens mobilize and adopt local growth management policies at the ballot box, see Figure 4.1. The first explanation suggests that community status is positively related to citizen mobilization and anti-growth policy adoption. This explanation is developed from two bodies of work. The first is inspired by Hirschman's (1970) exit, voice, and loyalty model in response to dissatisfaction with organizations and the second comes from the political participation literature. Lyons et al.'s (1992) work is an extension of Hirschman's model of consumer dissatisfaction with organizations. These scholars adapt Hirschman's model of response to consumer dissatisfaction to dissatisfaction with local government. Their results indicate that individuals are more likely to 'voice' (i.e. be proactive in creating change), rather than 'exit' their jurisdiction of residence when: 1) their dissatisfaction with local government grows over time; 2) they are highly invested in the current community (e.g. are long-term residents, have children in public schools,

higher home values); 3) they are homeowners versus renters; and 4) there are fewer alternatives to exit the current jurisdiction (usually due to low supply of housing or a "tight" housing market). The significance of investment and homeownership variables in their analysis points to elements of social status being important indicators of 'voice.'

The political participation literature also reveals a significant social status bias in activities that require citizen mobilization. There are a variety of reasons that this may be the case. First, it is believed that individuals from the upper strata of society share similar goals, preferences, and lifestyles and, therefore, will choose to live in a more homogeneous community (Tiebout, 1956). Moreover, these individuals will participate in the political process in order to maintain this homogeneity and the character of the community that they have chosen to live in (Neiman and Loveridge, 1981; Guest and Oropesa, 1984; Burbank et al., 2000). Second, individuals at the top of the social status hierarchy have the economic and political capacity to navigate the political process (McCarthy and Zald, 1977; Sharp, 2003). Finally, individuals with privileged backgrounds tend to have more invested in their assets (e.g. home, business, and community) and, therefore, are more motivated to protect them by utilizing the political process (Guest and Oropesa, 1984; Rosenstone and Hansen, 1993; Fischel, 2001). The culmination of these two bodies of work points to a strong positive link between community status and citizen mobilization to adopt anti-growth policies, as shown in Figure 4.1.

Although the adoption of the first growth management schemes in the early 1970s were clearly motivated by rapid population and housing growth, it is no longer clear that actual rates of growth are responsible for the citizen backlash against growth. Studies

that have attempted to determine whether growth pressures (i.e. high rates of past growth) are associated with growth management adoption find quite contradictory results. There are a few studies that do find evidence that previous rates of local growth are significant indicators of growth management adoption (Protash and Baldassare, 1983; Dovovan et al. 1994). There are other studies that show that jurisdictions with growth regulations are not growing at faster rates than other places (Baldassare, 1985; Baldassare and Wilson, 1996). Baldassare (1981) claims that residents usually have misperceptions about growth, causing them to overestimate rates of growth within their locality. In addition, research has found that perceptions of rapid growth (even though they may be wrong) are better predictors of growth management enactment than real rates of growth. Although empirical studies do not point to a clear relationship between cities experiencing growth pressures and growth management adoption, there is still wide held beliefs that citizen mobilization and growth management adoption is a reaction to growth pressures, therefore, the conceptual model predicts that there is a positive relationship.

Rather than viewing the adoption of growth management as a defensive action to preserve the quality of the community, there are scholars who believe that certain communities take offensive actions in order to maintain their elite standing within the metropolitan hierarchy (Hill, 1974; Logan, 1978). The metropolitan hierarchy perspective emphasizes the relative economic standing of a jurisdiction within the metropolitan structure. Logan (1978) asserts that municipalities at the top of the metropolitan hierarchy will tap into their political resources in order to maintain or improve their existing advantage. Moreover, he asserts that individuals and organizations manipulate the growth process in order to maintain or improve their economic standing

and, thus, contribute to the stratification of places. The conceptual model, as shown in Figure 4.1, indicates that metropolitan hierarchy is positively related to citizen mobilization and anti-growth policy adoption.

While the metropolitan hierarchy suggests that jurisdictions make growth decisions based on their own standing within the metropolitan hierarchy (i.e. inward looking perspective), those who espouse the strategic interaction perspective see growth decisions as a reaction to growth activities in the region, that is, an outward looking view (Brueckner, 1995; Brueckner, 1998). It is believed that local jurisdictions are in economic competition with one another for scarce resources (Peterson, 1981), and, therefore, must react and adjust to changes in growth that occur in neighboring jurisdictions. As a consequence, it is expected that jurisdictions located in regions with more growth management activity will be more likely to adopt growth management measures.

Also contained in the conceptual model are outcomes that result from anti-growth policy adoption. While there has been considerable attention paid to growth management's effect on housing growth, there has been less emphasis on understanding citizen enacted growth management measures and their consequences. Economic theory instructs that growth management has the potential to decrease supply of housing and/or increase demand in a variety of ways. To what extent growth management affects supply and demand depends on the elasticity of supply and demand for housing (Priest et al., 1977; Fischel, 1990).

While it is commonly understood that growth management is intended to limit growth, there may be inequitable outcomes that result. Pendall's (2000) 'chain of

exclusion' hypothesis suggests that land-use regulations that lower the supply of housing will shift housing development away from multi-family, rental, and affordable housing towards single-family housing. Consequently, a reduction in multi-family, rental, and affordable housing will result in fewer numbers of minorities living in the jurisdiction because they are more likely to live in these types of units. Thus, he argues that land-use regulations contribute to the exclusion of minorities. Other scholars posit that when growth management pushes the price of housing up (usually through restricting supply), this has an indirect effect of growth management on minority exclusion (Shlay and Rossi, 1981; Schill and Wachter, 1995).

Most urban policy models usually have a direct link from community characteristics to policy outcomes, omitting the actors involved in the process. This conceptual model brings in the role of citizens and argues that the factors that influence citizens to mobilize and adopt growth policies and the outcomes to housing and socioeconomic characteristics differ when citizens are involved, as opposed to other actors, such as local government officials. This conceptual model could look entirely different if we were interested in predicting what influences other actors to participate in the local growth process and how they might change growth outcomes. Therefore, this study is about citizens and their use of direct democracy to 'voice' their concerns and influence local decisions and outcomes regarding growth.

2. Research Hypotheses

The research hypotheses are developed from a review of the literature. They will be organized around the two broad research questions posed earlier. The first research question asks, "What predicts citizen mobilization and adoption of anti-growth policies?" The hypotheses related to this question are:

H1: Community Status
High status cities will be more likely to propose and adopt anti-growth policies.

H2: Growth Pressures
Cities experiencing high levels of growth will be more likely to propose and adopt anti-growth policies.

H3: Strategic Interaction
Cities located in regions with greater numbers of anti-growth policies will be influenced to propose and adopt anti-growth policies.

H4: Metropolitan Hierarchy
Cities at the top of the metropolitan status hierarchy will be more likely to propose and adopt anti-growth policies.

There will also be an exploratory analysis that attempts to understand which of these four hypotheses is a better predictor of specific growth management tools. There have been very few empirical studies that compare citizen support across different growth management tools and none that have looked at seven different tools. It is expected that there are different explanations that explain citizen mobilization and adoption of specific tools. In other words, there will be variations between which hypotheses (e.g. community status, growth pressures, strategic interaction, metropolitan hierarchy) better

predicts the proposal and adoption of different anti-growth tools. Since this is an exploratory analysis, there will be no formal hypotheses of the direction of the relationship between the explanatory variables and the specific tools.

The second research question asks, "How do growth management policies affect local housing and socioeconomic characteristics?" This analysis specifically examines growth management measures enacted through citizen initiatives and referenda. This is one among a number of methods by which growth can be restricted in local jurisdictions. This analysis attempts to understand the power of citizens in shaping growth outcomes. The hypotheses related to this research question are:

H5: Housing Growth

Cities that propose and adopt anti-growth measures will have lower levels of housing growth than cities that do not.

H6: Housing Composition

Cities that propose and adopt anti-growth measures will have lower rates of growth in multi-family and rental housing than cities that do not. Conversely, cities proposing and adopting anti-growth measures will have more single-family and owner-occupied housing than cities that do not.

H7: Socioeconomic Change

Cities that propose and adopt anti-growth measures will have lower levels of minority population growth, higher levels of white population growth, and greater gains in median household income than cities that do not.

B. Data and Methods

1. Data

Data for this study were assembled from a variety of sources. A list of land use ballot measures in California from 1986-2000 was compiled using two sources. The first source comes from the California Association of Realtors handbook and contains a list of land use ballot measures in California from 1986-1992. This list also provided a description of what types of growth management strategies or 'tools' were proposed. This description was used to identify whether or not the ballot measure was related to growth management and also to code the measure into growth management tool categories. From 1992-2000, a running tally of growth management ballot measures was documented by the managing editor, Paul Shigley, of *California Planning & Development Reports (CP&DR)*, a monthly newsletter specializing in planning and development issues in California. Unfortunately, the database compiled by *CP&DR* did not have detailed information on the growth management strategy that was proposed in the ballot measure. In order to obtain information about the contents of the growth management ballot measure, California city clerks offices were contacted in order to receive copies of sample ballots and relevant documents for each measure that was identified as a growth management measure in the CP&DR database. Also, if the CAR database did not contain sufficient detail to determine the growth management tool employed, then the sample ballots from these measures were also requested from the city clerks offices. Of the 262 sample ballots requested, there was an 85% success rate of

retrieval.[1] In total, 436 ballot measures from 159 cities were coded into growth management tools categories.

These categories of growth management tools were developed through a series of studies conducted by Madeline Glickfeld, Ned Levine, William Fulton, and the staff at the Solimar Research Group (for details, see Glickfeld et al., 1987; Glickfeld and Levine, 1992; Levine et al., 1996; Fulton et al., 2000; Fulton et al., 2002; Nguyen and Fulton, 2002). In 1988, Glickfeld and Levine (1992) spearheaded a survey of city and county planning directors in California in order to gather information about the universe of growth management tools adopted by local jurisdictions through a variety of different methods, including local ordinances, the general plan, a resolution or initiative/referenda. This survey listed 15 different growth management (or control) measures. In 1992, these researchers, along with William Fulton, conducted a follow-up survey of California city and county planning directors (Levine et al., 1996). This time, they added 3 more growth management measures to that list. From the two surveys, they determined that there were a total of 17 different measures. For a list of the 17 measures, see Table 4.1. The response rate among the 451 cities and 57 counties surveyed in 1988 was 87%. In 1992, the response rate was higher at 89%, with more cities surveyed. The high response rate and the broad range of growth management measures surveyed provides a comprehensive view on the types of growth management tools that local jurisdictions in California have at their disposal.

In a subsequent study, Fulton et al. (2002) condensed the 17 growth management techniques into 7 categories of commonly used 'tools' and relabeled these tools "to reflect current lexicon" (p. 4). The names for the 7 growth management tools are:

1) housing/population caps; 2) commercial/industrial caps; 3) urban growth boundaries; 4) infrastructure adequacy requirements; 5) zoning; 6) general controls; and 7) vote requirements. They used these categories to classify growth management ballot initiatives and referenda found in California during a 15-year span. According to Fulton and his colleagues, these seven tools have been widely accepted as the most commonly used growth management strategies found in California and have been used by other researchers studying growth management/control in California. Taken from Fulton et al. (2002, pgs. 4-7) the following is a description of the 7 growth management tools:

1. Housing/Population Caps

Population Growth Caps:

> Population growth caps establish a population growth limit or restrict the level of population growth for a given time period. These are usually implemented by restricting the number of housing units permitted for construction.[2]

Housing Permit Limitations:

> Housing permit limitations restrict the total number of residential building permits in a given time period.

2. Commercial/Industrial Caps

Commercial Square Footage Limitations:

> Measures to restrict the amount of square footage of commercial structures that can be built within a given time frame.

Industrial Square Footage Limitations:

> Measures to restrict the amount of square footage of industrial structures that can be built within a given time frame.

Commercial Building Height Limitations:

Measures enacted within the last five years to restrict the permitted height of commercial buildings. Restricts the structural floor area that can be built on a given parcel (floor-area ratio).

3. Urban Growth Boundaries

Urban Growth Boundary (UGB), Urban Limit Line, Urban Service Boundary, or Greenbelt:

A limit, inside of and other than the boundaries of the jurisdiction, beyond which residential, commercial, or industrial development is not currently permitted.

Phased Development:

Phased (or tiered) development areas where development approval is deferred until a certain time period or until existing developed areas are substantially developed.

4. Infrastructure Adequacy

Residential Infrastructure Requirements:

Measures that specifically require adequate service levels (i.e. road capacity or traffic congestion) or service capacity (i.e. water or sewer service capacity) prior to or as a condition of residential development approval.

Commercial/Industrial Infrastructure Requirements:

Measures that specifically require adequate service levels (e.g. road capacity) or service capacity (e.g. water or sewer service) prior to, or as a condition of, commercial or industrial development approval.

5. Zoning

Residential Downzoning:

Measures to reduce the permitted residential density by general plan amendment or ordinance.

Residential Rezoning:

Measures to rezone or redesignate land previously zoned for residential use to agriculture, open space, or other less intense uses.

Commercial/Industrial Rezoning

Measures to rezone or redesignate land previously zoned for commercial use to residential, agriculture, open space or other less intense uses.

6. General Controls

Growth Management Element:

A comprehensive plan to address growth issues within the context of the general plan.

Subdivided Lot Restrictions:

Measures that restrict the total number of new subdivided lots that can be created in a given time frame.

Other Measures:

Other measures to control the rate, intensity, type or distribution of development (this could include infill and redevelopment strategies).

7. Vote Requirements

Voter Approval for Changes in Zoning or General Plan Land Use Designations:

Measures to require voter approval for certain kinds of changes to the zoning ordinance and the general plan land-use designations, including an increase in residential densities and a change on specific parcels from open space or agricultural use to residential or other urban uses.

Council Supermajority for Changes in Zoning or General Plan Land Use Designations:

Measures to require that some or all general plan and zoning ordinance amendments that allow increased residential densities or other increases in

urbanization be approved by a greater than simple majority of the governing board of local jurisdictions.[3]

Two individuals, myself and another staff member at the Solimar Research Group, who were instrumental in developing the seven tool categories, coded the ballot measures. Both coders were trained together and followed the same guidelines in order to maximize intercoder reliability. A pilot test, in which both coders coded 30 of the same ballot measures, was conducted. The coding scheme was refined based on information learned from the pilot test. Another check for intercoder reliability was conducted during the coding process by selecting 10% of the coded ballot measures. A test of intercoder reliability after all the coding of all ballot measures was completed revealed very high scores, with percent agreement at 96% and Cohen's Kappa calculated to be .94. These are both excellent intercoder reliability values according to extant research.[4] For more information about intercoder reliability calculations and acceptable standards, see Lombard et al. (2002).

Each ballot measure contained between 1 to 3 growth management tools. The total number of tools among the 436 ballot measures is 573. In addition to coding the ballot measure into tool categories, there was also a distinction made between tools that were growth promoting versus those that attempt to restrict growth. Therefore, the same tool could be classified as a PRO-GROWTH or ANTI-GROWTH tool, depending on the intent of the tool. For example, if the purpose of a zoning tool is to increase permitted densities, it would be considered a pro-growth tool, but if a zoning tool attempted to rezone land for less intense uses (e.g. rezoning residential lands to agriculture), it would be categorized as an anti-growth tool. Other variables in the growth management tool

database include: DATE, LOCATION and PASS. DATE refers to the date in which a growth management tool was placed on the ballot and LOCATION indicates the city in which the vote on the ballot measure tool took place. The PASS variable is coded '1' if voters passed the tool at the ballot box and '0' if it failed.[5] This database of ballot measures and tools was merged with city level demographic and housing data from the 1980, 1990, and 2000 Censuses. The units of analysis for this study are cities, of which there are varying numbers depending on data from different years of the census. If 1980 Census data are used, then the unit of analysis is 422. If data from the 1990 Census and later are used, then the unit of analysis is 456.

2. Methods

a. Descriptive Analyses

This next analysis will provide information about the existing trends in local growth management ballot measures and tools in California. Trends in the frequency of proposal and adoption, passage rate, anti- versus pro-growth, regional variation, and various time periods will be explored. There will also be a more in-depth comparison of trends for each of the seven different tools. Furthermore, descriptive statistics will be discussed for cities that proposed no ballot measures, cities that proposed but did not adopt, and cities that adopted one or more ballot measures during the period of the study, 1986-2000.

b. Logistic Regression

There will be two sets of analytic approaches employed in this study. The first approach, logistic regression will be used in the first part of the analysis and ordinary least squares (OLS) regression in the second. Logistic regression is employed to test the relative merits of four hypotheses relating to explanations for why cities propose and adopt anti-growth ballot measures. Anti-growth ballot measures are defined as any ballot measure that attempts to restrict the rate, distribution, timing or sequencing of growth. The dependent variables are both dichotomous, see Table 4.2. The first dependent variable, 'PROPOSE,' is coded '1' if a city has proposed one or more (1+, hereafter) anti-growth ballot measure in the period of study, 1986-2000, and '0' otherwise. The second dependent variable, 'ADOPT,' is coded '1' if a city has adopted 1+ anti-growth ballot measure and '0' otherwise.

City status variables[6] include: suburban status [SUBURB], white population [WHITE 1980], residential stability [RES. STABILITY], homeownership rate [HOMEOWNERSHIP], median household income [LOW INC 1980, MIDDLE INC 1980, and HIGH INC 1980].[7] All of these variables are expected to be positively related to PROPOSE and ADOPT. Interaction variables for suburb by median household income are also included in the community status model. The omitted category is SUBURB BY HIGH INC 1980.

Variables measuring growth pressures are: population change [POP CH 1980-90], white population change [WHITE CH 1980-90],[8] change in population <18 years old [KID CH 1980-90], and travel time to work [TRAVEL 1980]. Each growth pressure

variable is predicted to have positive relationship with PROPOSE and ADOPT. KID CH 1980-90 is a proxy for school overcrowding. If there is a greater increase in the number of children in the jurisdiction, this will place greater strains on the schools, and, therefore, induce the proposal and adoption of growth management. The relationship between WHITE CH and PROPOSE/ADOPT also needs some clarification. The political participation literature suggests that whites participate in the political process at a significantly higher rate than non-whites, therefore, cities that have greater white population growth or stable white populations are expected to be more likely to use the ballot box to propose and adopt growth management policies.

The strategic interaction [STRATEGIC INTERACTION] variable is a ratio calculated by dividing the number of other cities, within the same county, that have proposed at least one ballot measure during the period of study by the total number of cities in the county. It is expected that the higher the ratio, which represents more strategic interaction, the more likely cities are to adopt anti-growth policies.

Metropolitan hierarchy [METRO HIERARCHY] is a rank ordering of city median incomes by quintiles within Metropolitan Statistical Areas. This variable is also predicted to be positively related to the adoption of anti-growth ballot measures. Control variables include population size [LOW POP, MED POP, and HIGH POP],[9] age structure of population [KIDS 1980] and [SENIORS 1980], and region dummy variables.[10] The omitted category for the regional dummy variables is the San Francisco Bay Area [SF BAY] and the other categories are LA REGION and CENTRAL VALLEY. For further detail about measurement independent and dependent variables, see Table 4.2.

To determine the differential effects of the four hypotheses, the set of variables for each hypothesis will be included in the model additively. Thus, the first model, predicting PROPOSE, will regress only the community status variables. The second model will include community status, in addition to, growth pressure variables. The strategic interaction variable is added in the third model. Finally, the full model contains all the variables in the previous models along with a metropolitan hierarchy variable. There will be four models with PROPOSE as the dependent variable and they are expressed as:

Model 1a: $PROPOSE = \alpha_0 + \beta_1$ Community Status + Controls + ε_i

Model 1b: $PROPOSE = \alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + Controls + ε_i

Model 1c: $PROPOSE = \alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + Controls + ε_i

Model 1d: $PROPOSE = \alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + Controls + ε_i

Another four models, using the same independent variables and additive method will be used to predict ADOPT. The four model using ADOPT as the dependent variable is denoted:

Model 2a: $ADOPT = \alpha_0 + \beta_1$ Community Status + Controls + ε_i

Model 2b: $ADOPT = \alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + Controls + ε_i

Model 2c: $ADOPT = \alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + Controls + ε_i

Model 2d: ADOPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + Controls + ε_i

The next analysis will also utilize logistic regression analysis. This analysis will determine whether explanations for support of growth management differ when growth management tools are disaggregated. In other words, "Are there different explanations for support for growth management depending on the growth management tool specified?" It is predicted that of the four hypotheses, some hypotheses will better explain different growth management tools than others. For example, the community status hypothesis may be a better predictor of housing/population caps adoption and the growth pressures hypothesis may be better at explaining why cities adopt infrastructure requirements. There will be no formal hypotheses provided for each of the growth management tools since there is no prior theory to guide the hypotheses.

In these regression models, the independent variables will be the same as the logistic regression models in the propose and adopt models found in previous section. These independent variables will be regressed on seven dependent variables, representing the different tools. The first dependent variable, the adoption of an anti-growth housing/population cap [HSGADPT], is coded '1' if a city adopted 1+ anti-growth housing/population cap during the study period, 1986-2000, and '0' if it has not. The other dependent variables, the adoption of anti-growth commercial/industrial caps [COMADPT], infrastructure adequacy [INFADPT], urban growth boundary [UGBADPT], vote requirements [VOTEADPT], zoning [ZONEADPT], and general controls [GENADPT] involved the same coding scheme as HSGADPT. These seven logistic regression models will determine if any of the hypotheses, growth pressure,

community status, strategic interaction, and metropolitan hierarchy, better explains the adoption of different growth management tools. These seven models will be expressed as:

Model 3a: UGBADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Model 3b: VOTEADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Model 3c: ZONEADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Model 3d: GENADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Model 3e: HSGADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Model 3f: COMADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Model 3g: INFADPT = $\alpha_0 + \beta_1$ Community Status + β_2 Growth Pressures + β_3 Metropolitan Hierarchy + β_4 Strategic Interaction + β_5 Controls + ε_i

Although other research has provided descriptive analyses comparing support for different growth management tool categories (Nguyen and Fulton, 2002), this analysis will employ regression analysis in order to make causal inferences. This analysis contributes to the literature because it will provide a better understanding of support for different growth management tools using one of the largest growth management tool databases within a single state to date. It is predicted that different hypotheses (out of the four) will be better predictors depending on which tool is specified.

c. Ordinary Least Squares Regression

The next analysis will investigate the effects that growth management has on new housing change and socioeconomic characteristics. For this analysis, Ordinary Least Squares (OLS) regression will be employed.[11] The dependent variables measuring housing change includes: number of housing units 2000 [HOUSING 00], number of single-family units [SINGLE-FAMILY 00], number of multi-family units [MULTI-FAMILY 00], and percentage of housing that is renter-occupied 2000 [RENTAL 00] (see Table 4.3). The models with the dependent variables, HOUSING 00, SINGLE-FAMILY 00, and MULTI-FAMILY 00, are measures of net housing change, which is the number of all new units minus demolished units. Net housing change is determined by regressing each of these variables with their 1990 values, along with a number of other variables that are expected to effect housing unit growth (Levine, 1999). The model predicting RENTAL 00 measures the percent change in rental-occupied housing units.

There are also two main independent variables of concern for each of these models. The first main variable of concern is PROPOSE 1986-98,[12] which is coded '1' for cities that have proposed 1+ ballot measure(s) between 1986-1998 and '0' for cities that have not and a set of control variables that are relevant to each dependent variable. It is predicted that cities that proposed ballot measures will have lower rates of growth in overall housing units, higher growth in single-family units, and a reduction in multi-family and rental-occupied housing units. These models can be expressed as follows:

Model 4a: HOUSING 00 = $\alpha_0 + \beta_1$ Propose 1986-98 + β_2 Housing 90 + $\Sigma\beta_i$ Controls$_i$

Model 4b: SINGLE-FAMILY 00 = $\alpha_0 + \beta_1$ Propose 1986-98 + β_2 Single-Family 90 + $\Sigma\beta_i$ Controls$_i$

Model 4c: MULTI-FAMILY 00 = $\alpha_0 + \beta_1$ Propose 1986-98 + β_2 Multi-family 90 + $\Sigma\beta_i$ Controls$_i$

Model 4d: RENTAL 00 = $\alpha_0 + \beta_1$ Propose 1986-98 + β_2 Rental 90 + $\Sigma\beta_i$ Controls$_i$

The other main independent variable of concern is ADOPT 1986-98 and is coded '1' for cities that have adopted 1+ ballot measures between 1986-1998. These models examine the effects of the adoption of growth management policies at the ballot box have on housing change. These models are expresses as:

Model 5a: HOUSING 00 = $\alpha_0 + \beta_1$ Adopt 1986-98 + β_2 Housing 90 + $\Sigma\beta_i$ Controls$_i$

Model 5b: SINGLE-FAMILY 00 = $\alpha_0 + \beta_1$ Adopt 1986-98 + β_2 Single-Family 90 + $\Sigma\beta_i$ Controls$_i$

Model 5c: MULTI-FAMILY 00 = $\alpha_0 + \beta_1$ Adopt 1986-98 + β_2 Multi-family 90 + $\Sigma\beta_i$ Controls$_i$

Model 5d: RENTAL 00 = $\alpha_0 + \beta_1$ Adopt 1986-98 + β_2 Rental 90 + $\Sigma\beta_i$ Controls$_i$

The OLS models predicting socioeconomic change contain the following dependent variables: percentage Black population 2000 [BLACK 00], percentage Hispanic population 2000 [HISPANIC 00], percentage non-Hispanic White population 2000 [WHITE 00], and median household income 2000 [MEDIAN INCOME 00]. Similar to the housing change variables, there are two independent variables that are of

interests, PROPOSE 1986-1998 and ADOPT 1986-1998. These models determine whether the proposal or adoption of growth management measures effects socioeconomic change. These models are as follows:

Models 6a: % BLACK 00 = $\alpha_0 + \beta_1$ Propose 1986-1998 + β_2 % Black 90 + $\Sigma\beta_i$ Controls$_i$

Models 6b: % HISPANIC 00 = $\alpha_0 + \beta_1$ Propose 1986-1998 + β_2 % Hispanic 90 + $\Sigma\beta_i$ Controls$_i$

Models 6c: % WHITE 00 = $\alpha_0 + \beta_1$ Propose 1986-1998 + β_2 % White 90 + $\Sigma\beta_i$ Controls$_i$

Models 6d: MEDIAN INCOME 00 = $\alpha_0 + \beta_1$ Propose 1986-1998 + β_2 Median Income 90 + $\Sigma\beta_i$ Controls$_i$

Models 7a: % BLACK 00 = $\alpha_0 + \beta_1$ Adopt 1986-1998 + β_2 % Black 90 + $\Sigma\beta_i$ Controls$_i$

Models 7b: % HISPANIC 00 = $\alpha_0 + \beta_1$ Adopt 1986-1998 + β_2 % Hispanic + $\Sigma\beta_i$ Controls$_i$

Models 7c: % WHITE 00 = $\alpha_0 + \beta_1$ Adopt 1986-1998 + β_2 % White 90 + $\Sigma\beta_i$ Controls$_i$

Models 7d: MEDIAN INCOME 00 = $\alpha_0 + \beta_1$ Adopt 1986-1998 + β_2 Median Income 90 + $\Sigma\beta_i$ Controls$_i$

The controls in all of these models is determined by extant empirical research and they include: density 1990 [DEN 90], year of incorporation [INC. YR.], suburban status 1990 [SURBURB 90], median household income 1990 [INCOME 90], residential stability [RES. STABILITY], percentage of owner-occupied units 1990 [HOMEOWNERSHIP], % owner-occupied or rental housing units vacant 1990

[VACANT] travel time to work 1990 [TRAVEL], employment change 1980-1990 [EMP. CH], and four regional dummy variables [SF BAY, LA REGION, CENTRAL VALLEY, and OTHER]. Similar multivariate models have been used by other researchers examining the effect of regulation or growth controls on growth outcomes (Shlay and Rossi, 1981; Logan and Zhou, 1989; Malpezzi, 1996; Levine, 1999; and Pendall 2000). These studies guided the development of the OLS models in this analysis.

C. Summary

This chapter provides a conceptual model and formal hypotheses that are intended to guide the empirical analysis. It also outlined the data that will be utilized and the analysis techniques that are employed in this dissertation. The following chapter will describe the results of this analysis. It presents the results for the descriptive analysis of growth management ballot measures and tools. In addition, the following chapter contains a discussion of the results for the multivariate regression analyses.

ENDNOTES

[1] Upon requesting the sample ballots, it was realized that there were five duplicate measures that were on the list and, therefore, these were omitted. Other reasons for the lack of retrieval of ballot measures involved city and county clerks staff not being able to find copies of sample ballots or not having sufficient staff members to locate these documents. In general, city and county clerks staff attempted to be helpful.

[2] Although cities label the growth management measure a "population cap," they do so by limiting the number of housing units approved for development. An estimate of the number of persons per housing unit is used to determine how many housing units should be limited in order that the population does not exceed the cap.

[3] A supermajority vote requires approval from at least two-thirds of the local governing council. In contrast, a simple majority vote only requires an approval rate over 50%.

[4] The methodological literature suggests that two measurements of intercoder reliability should be calculated. If percent agreement is used, another measure that accounts for the chance agreement, such as Cohen's Kappa, is recommended. There is no official rule of thumb as to an acceptable intercoder reliability value, but most researchers would agree that a score above .90 is very acceptable (Lombard et al., 2002).

[5] There are cases in which the majority of voters (over 50%) vote in favor of passing the measure, but it fails. This happens when there is an alternative measure that, if passed, would nullify the measure in question.

[6] The original full model included three other community status variables: median housing value, % college educated, and % persons in professional or managerial occupations. These variables were highly correlated with the variable median household income, with bivariate correlations of .70 and above and, therefore, created problems of multi-collinearity. The decision to retain median household income and omit these three variables in the analysis was based on income being the most frequently used indicator of social status in the political participation and growth management literatures.

[7] When the distribution of independent variables was evaluated, median household income was identified as being positively skewed. Instead of transforming the variable, such as by taking the log value, three categories were created to classify median household income. These three categories are interpreted as low, middle, and high community status.

[8] The original full model included variables measuring change in Asian population, change in Black population, and change in Hispanic population, but none of these variables were significant in any of the models. For the sake of parsimony, they are not included here.

[9] The distribution of population was positively skewed, therefore, three population categories are developed. The categories were created by taking the 1980 median population of each city and dividing the number of cities into three equal numbered groups. These groups represent low population cities, with less than 7,282 people, median population cities containing between 7,282 to 30,235 people, and high population cities containing over 30, 236 people.

[10] Percentage of registered voters who are Democrat was included as a control for political ideology in the original full model, but it was not significant in any of the models and was, therefore, omitted.

[11] Initially, a plot of the squared residuals from the OLS regression against the independent variable was conducted to determine if heteroskedasticity was present, but there could be no conclusive determination made from reviewing the plot. Therefore, a more formal test for heteroskedasticity, Park's Test (Gujarati, 2002) was employed. Using Park's test, there appears to be no statistically significant evidence for heteroskedasticity. Therefore, the estimates are efficient and there are no violations of OLS assumptions.

[12] Although the ballot measure database contains anti-growth measures for the period of 1986-2000, the database was truncated for this analysis in order that the anti-growth policies have time to have an effect on housing and socioeconomic change. According to Levine's (1999) analysis of growth control enactment in California, a lag of 1-2 years is sufficient time to notice the effects of growth regulating policies.

Figure 4.1: Conceptual Model

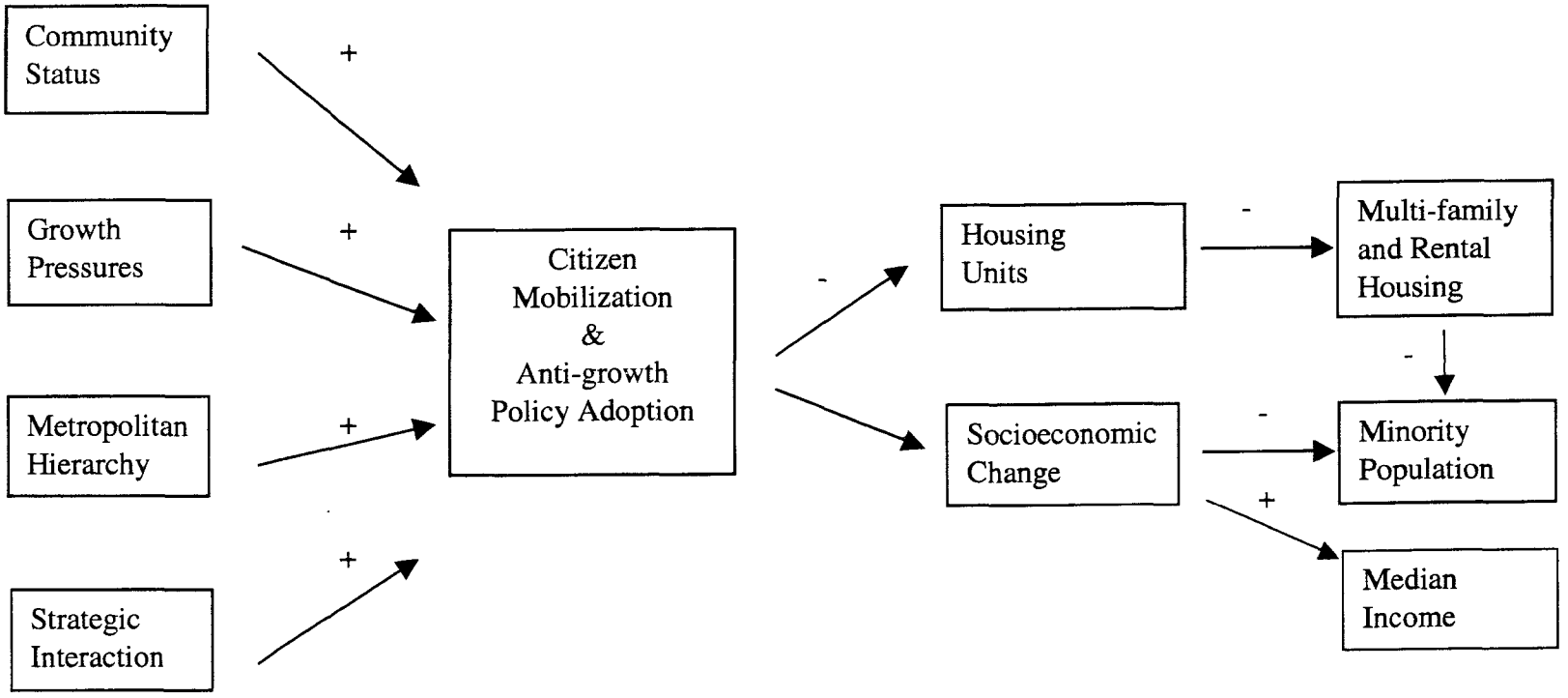

Table 4.1: Growth Management Measures Identified by Levine, Glickfeld, and Fulton (1996)

1	Residential infrastructure adequacy requirements
2	Reduced permitted residential density
3	Housing caps
4	Rezoned residential land to less intense use
5	Population caps
6	Voter approval
7	Subdivision restrictions
8	Super-majority council vote required to increase residential densities
9	Commercial/industrial infrastructure requirements
10	Reduced permitted height of commercial/office buildings
11	Rezoned commercial or industrial land to less intense use;
12	Restricts square footage within given time frame for commercial development
13	Restricts square footage within given time frame for industrial development
14	Floor-area ratio restrictions
15	Established urban limit line
16	Adopted growth management element in general plan
17	Phased/tiered development areas

Table 4.2: Variable Descriptions, Logistic Regression Models

VARIABLES:	DESCRIPTION:
DEPENDENT VARIABLES:	
PROPOSE	1+ anti-growth measure proposed (1986-2000) = 1, else = 0
ADOPT	1+ anti-growth measure adopted (1986-2000) = 1, else = 0
HSGADOPT	1+ anti-growth housing/population cap tool adopted (1986-2000) =1, else = 0
COMADOPT	1+ anti-growth commercial/industrial cap tool adopted (1986-2000) =1, else = 0
UGBADOPT	1+ anti-growth urban growth boundary tool adopted (1986-2000) =1, else = 0
VOTEADOPT	1+ anti-growth vote requirement tool adopted (1986-2000) =1, else = 0
ZONEADOPT	1+ anti-growth zoning tool adopted (1986-2000) =1, else = 0
GENADOPT	1+ anti-growth general tool adopted (1986-2000) =1, else = 0
COMMUNITY STATUS:	
SUBURB	Not in a metro, urbanized, or central city = 1, else = 0
WHITE 80	% White in population 1980
HOWEOWNERSHIP	% Owner-Occupied Housing
RES. STABILITY	% living in same house between 1985-1990
LOW INCOME 80	Cities with median incomes below $32,433 (1995$)
MIDDLE INCOME 80	Cities with median incomes between $32,433 & $42,641 (1995$)
HIGH INCOME 80	Cities with medain incomes higher than $42,642 (1995$)
LOW INC X SUBURB	Interaction of low income cities by suburban status
MIDDLE INC X SUBURB	Interaction of middle income cities by suburban status
HIGH INC X SUBURB*	Interaction of high income cities by suburban status

* Denotes omitted categories

Table 4.2 Cont.: Variable Descriptions, Logistic Regression Models

GROWTH PRESSURES:	
POP CH 1980-90	Percent population change 1980-90
WHITE CH 1980-90	Percent White population change 1980-90
KID CH 1980-90	Percent change in <18 years old in population 1980-90
TRAVEL	Average travel time to work for workers 16+ who did not work at home
STRATEGIC INTERACTION	
STRATEGIC INTERACTION	# Other Cities in County that Proposed Anti-growth Measure/Total # of Cities in County
METROPOLITAN HIERARCHY	
METRO. HIERARCHY	Rank of 1980 Median Household Income (by quintile) within MSA
CONTROLS	
KID 80	% <18 years old in population 1980
SENIORS 80	% 65+ years old in population 1980
LOW POP	Cities with 1980 population < 7,282
MED POP	Cities with 1980 population between 7,282 & 30,235
HIGH POP*	Cities with 1980 population > 30,236
REGION	4 Dummies: San Francisco Bay Area*, Los Angeles, Central Valley, Other

Table 4.3: Variable Descriptions, Ordinary Least Squares Regression Models

VARIABLES:	***DESCRIPTION:***
DEPENDENT VARIABLES:	
HOUSING 00	Number of Housing Units 2000
SINGLE-FAMILY 00	Number of Single-family Housing Units 2000
MULTI-FAMILY 00	Number of Multi-family Housing Units 2000
RENTAL 00	Number of Renter-Occupied Housing Units 2000
WHITE 00	% White Population 2000
BLACK 00	% Black Population 2000
HISPANIC 00	% Hispanic Population 2000
MEDIAN INCOME 00	Median Household Income 2000
INDEPENDENT VARIABLES:	
PROPOSE 1986-1998	1+ anti-growth measure proposed (1986-1998) = 1, else = 0
ADOPT 1986-1998	1+ measure adopted (1986-1998) = 1, else = 0
CONTROL VARIABLES:	
POP 90	Population 1990
HOUSING 90	Number of Housing Units 1990
SINGLE-FAMILY 90	Number of Single-family Housing Units 1990
MULTI-FAMILY 90	Number of Multi-family Housing Units 1990
DENSITY 90	Population Per Square Mile 1990
INC. YR.	Year of Incorporation
SUBURB = 1	Not in a metro, urbanized, or central city = 1, else = 0

* Denotes omitted category

Table 4.3 Cont.: Variable Descriptions, Ordinary Least Squares Regression Models

CONTROL VARIABLES:	
INCOME 90	Median Household Income 1990
WHITE 90	% White Population 1990
BLACK 90	% Black Population 1990
HISPANIC 90	% Hispanic Population 1990
RES. STABILITY	% living in same house between 1985-1990
HOMEOWNERSHIP	% Owner-Occupied Housing
TRAVEL	Average travel time to work for workers 16+ who did not work at home
JOB CH	% Employment Change 1980-1990
REGION	4 Dummies: San Francisco Bay Area*, Los Angeles, Central Valley, Other

V. RESEARCH RESULTS

A. Initial Analyses

This analysis examines trends in growth management ballot measures and tools in California from 1986-2000. It not only contains information on growth management measures that attempt to slow growth, but also those that promote growth. The purpose of this analysis is to provide a broad picture of the local growth management ballot box landscape throughout this 15-year period. It is instructive to understand the trends in ballot box activity in California since it appears that other states are catching on to this trend. In the November 2000 election alone, Ohio had 69 and Colorado had 67 growth related measures on the ballots (Myers and Puentes, 2001). Thus, a look at California's fascination with the ballot box may be a guide into the future for other places.

1. Growth Management Ballot Measure Trends

Examining the trend in the frequency of ballot measures over time reveals several distinct patterns. First, ballot measures relating to growth are more frequent in November elections, than in other month, and in even year elections (see Figure 5.1). Ballot measures have a greater likelihood of appearing on even year November elections because these elections coincide with gubernatorial and presidential elections. More measures qualify for the ballots during these elections in hopes that more voters will turn out at the polls. Second, the period having the greatest number of growth measures

qualifying for the ballots, 210 measures occurred between the 5-year span of 1986-1990. In comparison, only 71 growth measures qualified between 1991-1995 and 155 during the period of 1996-2000. It appears that interest in growth issues at the ballot box is related to economic conditions within the state. During the early 1990s, California experienced an economic recession in which levels of housing construction and job growth were both low and housing prices declined. This was also the period in which growth issues at the ballot box showed up least frequently. As the economy began to recover in late 1995, growth ballot measure activity also picked up. These trends suggest that economic growth and development is associated with political activity regarding growth at the ballot box.

Comparing the frequency of anti-growth to pro-growth ballot measures, anti-growth measures appear more often than pro-growth throughout every year of the study. Figure 5.2 reveals that even in years when the frequency of anti-growth ballot measures is the lowest (1994-1998), anti-growth measures are still more likely to appear on the ballots than pro-growth. This suggests that anti-growth issues are more dominant than pro-growth issues throughout California, regardless of the economic conditions. An alternative explanation is that anti-growth issues are more prevalent at the ballot box because they are controversial, whereas pro-growth issues are approved through other channels and are not decided at the ballot box. Although anti-growth policies dominate in frequency of appearance at the ballot box, during certain time periods, pro-growth ballot measures are adopted more often than anti-growth. Figure 5.3 shows that the period in which pro-growth measures are more likely to be adopted than anti-growth measures is 1994-1997. In every other year, anti-growth measures are considerably more

likely to be adopted than pro-growth measures (except 1988, when the adoption rate of pro-growth measures was slightly higher). In light of earlier discussion about ballot measure activity relating to the state's economy, the greater rates of adoption for pro-growth measures between 1994-1997 coincides with an economic recovery period.

There are clear regional differences in the frequency and type of growth measures proposed and adopted at the ballot box. Southern California[1] has the greatest number of growth related ballot measures, with 209 (See Table 5.1). Voters in the San Francisco Bay Area[2] are also asked to make decisions on a large number of growth issues at the ballot box. These two regions have the vast majority of growth ballot measures, with a total of 83% of all ballot measures relating to growth. These regions also place a greater number of anti-growth, as opposed to, pro-growth measures on the ballots. This is not surprising since they are regions in the state where the problems associated with growth are the most severe. Cities in these two regions also adopt a greater percentage of anti-growth than pro-growth measures. Southern California's passage rate for anti-growth measures is 13.7% more than for pro-growth measures and the difference for the San Francisco Bay area is 8.0%. The Central Coast region, which includes cities in the counties of Monterey, San Benito, San Luis Obispo, Santa Barbara, and Santa Cruz, have a much lower number of ballot measures, but they have a much higher passage rate for both anti-growth and pro-growth measures, 75.0% and 63.6%, respectively. The Central Valley[3] is the only region with a greater frequency and adoption rate of pro-growth versus anti-growth measures. This is a region of California that is in need of economic development due to its high rates of poverty, unemployment, and low median household income relative to other regions in the state (Umbach, 1997). T-tests reveal that there are

significant differences in the frequency of anti-growth measures versus pro-growth[4] measures on the ballots and there is also a significant difference between the rate of adoption for pro-growth and anti-growth measures.[5]

The next analysis involves a comparison of descriptive characteristics across different types of cities. The different types include cities that: (1) did not propose any anti-growth ballot measures; (2) proposed anti-growth ballot measures and failed to adopt at least one; and (2) proposed and adopted one or more anti-growth ballot measures during the period of the study. As shown in Table 5.2, there were interesting differences in mean values across the types of cities. An ANOVA, including post-hoc tests,[6] was performed to determine which of the three categories were significantly different from one another. The full results of the ANOVA can be found in Appendix A. Only the categories that were significantly different in the ANOVA and post-hoc tests will be reported here ($n=422$, $p < .05$). As commonly believed, cities that propose or adopt anti-growth measures were more likely to be suburban than cities. Contrary to what is expected, cities that adopted anti-growth policies had lower rates of residential stability, greater decreases in children population, and lower proportions of children population. Thus, the idea that a higher number of children and higher rate of growth in children population induces growth management adoption due to school overcrowding may not be the correct hypothesis. Instead, it may be places that have a greater number of children and have increasing growth in children population do not support growth restricting policies because these places need more growth and expansion to accommodate their large and growing children population. Or, it could be that these places are also newer

with more affordable single-family housing and, therefore, are more attractive to families with children.

As predicted, cities that adopted anti-growth measures had a higher proportion of whites than cities that did not adopt. Cities that adopt growth management measures also appear to be experiencing more growth pressures, with greater travel time to work than cities in the two other categories. Cities that adopt growth management are also significantly larger and were located in regions that had more growth management activities (greater strategic interaction value). The post-hoc test reveals that strategic interaction levels were significantly different between cities that adopted growth management and the other two categories, cities with no ballot measures and cities that proposed, but did not adopt any. The variables that did not show significant variation across city categories were: HOMEOWNERSHIP, POP CH 1980-90, MEDIAN INCOME, SENIORS, and METRO HIERARCHY.

Comparing cities that adopted to those that either did not propose any or proposed and failed growth management measures provides results that are not entirely consistent with the predictions in the literature. First, there were no significant differences in homeownership rate, population change 1980-90, household income, and metropolitan hierarchy across different city categories. Second, there were some unexpected results, such as cities adopting growth management having lower rates of residential stability, smaller children population, and having lower rates of growth in children population.

The trends that matched extant research include: cities that adopted growth management had a higher proportion of whites, greater travel time to work, larger population, higher rates of strategic interaction and were more likely to be suburban.

Overall, these findings suggest that the characteristics of anti-growth cities are more varied and complicated than what has been depicted in the literature.

2. Trends in Growth Management Tools

The growth management tools database contains 573 tools placed on the ballots in California cities between 1986-2000. There were 175 cities, roughly 33% that qualified at least one ballot measure tool. Among cities that did qualify tools, 53 qualified only one tool during the 15-year period. In fact, as Table 5.3 shows, among the cities that proposed ballot measure tools, most of these cities proposed only one or a few of them, revealing that the frequency that growth management measures appear on the ballots in most cities is relatively low. In contrast, there were a number of cities that utilized the ballot box frequently for growth related issues. The cities qualifying the most tools are San Diego with 32, Lodi with 25, and San Francisco with 24. Therefore, it is common for voters in these three cities to make decisions about growth at the ballot box. These three cities appear to have institutionalized the use of the ballot box as a mechanism to pass growth management policies.

While the previous discussion related to the frequency that tools qualified in cities, this next analysis will look at the mix of different tools that qualify and are adopted. Cities that qualify ballot measures usually qualify between 1-3 different types of tools. There are 65 cities that qualified only one type of tool, 43 cities qualified two types and 28 cities qualified three, see Table 5.4. There were only 2 cities that proposed all seven different types of tools throughout the 15-year span. When the variation in tools

among cities that adopted growth management tools is examined, there is even less variation in the mix of tools. Table 8 reveals that no cities adopted over 5 different types of tools. The low frequency of tool qualification and adoption, as well as, the small variation in the number of different types of tools found in cities reveals that the use of the ballot box for growth management issues is probably not the dominate method that jurisdictions use to manage growth. An exception to this is that there are a small number of cities, such as San Diego, Lodi, and San Francisco that have used the ballot box frequently in attempts to adopt a variety of different types of growth management strategies.

Out of the seven specific types of tools, general controls, zoning, and vote requirements are the tools most frequently proposed by cities. As shown in Table 5.5, there were 147 general controls, 113 zoning, and 108 vote requirements tools that qualified for the ballots. Requiring adequate infrastructure was the tool least likely to appear on the ballots. Not only was it not frequently found on the ballots, but even when it was, it was less likely than the other tools to be adopted. Urban growth boundaries appeared on the ballots 65 times and had the highest adoption rate of all tools, at 68%. Commercial/industrial caps, vote requirements, and general controls all had an adoption rate greater than 50%. Interestingly, housing/population caps, which were the first types of growth management tools to be implemented in California, were not found very frequently throughout the study period and only had a 40% adoption rate.

An examination of the distribution of tools over time reveals that housing/population caps did indeed qualify more often in the early years of the study (1986-1990) and declined in later years, see Figure 5.4. An analysis of tools proposed by

5-year interval, as seen in Table 10, shows that more tools (266) were proposed between 1986-1990 than in other 5-year intervals. There was also a dramatic drop in use of the ballot box during the period between 1991-1995 (only 95 tools qualifying for the ballots) and then a rise again in 1996-2000, with 212 tools on the ballots. Looking at individual tools over time, five of the seven tools were prevalent in the earliest period, but were proposed less frequently in later periods. The only two tools that grew in popularity are urban growth boundaries and vote requirements. Both of their shares of the total tools increased over time. Between 1986-1990, urban growth boundaries represented only 4.1% and vote requirements only 14.7% of the total tools proposed. In the later period (1996-2000), urban growth boundaries garnered 20.8% and vote requirements 26.5% of all the tools that qualified for the ballot box. Thus, the rising trend in growth management strategies among voters is to manage growth by creating urban growth boundaries and subjecting future land-use or general plan changes to more voting.

The vast majority of growth management ballot measure tools were proposed in two regions of the state, Southern California and the San Francisco Bay Area, 287 and 194 tools, respectively (see Table 5.6). While the Southern California region had the greatest number of tools proposed, the San Francisco Bay Area had a higher adoption rate.[7] The adoption rate was 63.4% for the San Francisco Bay Area versus 57.9% for Southern California. Growth management ballot measure activity is extremely concentrated in these two areas, with a smattering of ballot measures popping up in the Central Valley and along the Central Coast.[8] There are very few, if any, ballot measures in the inland and most northerly part of the state.

When growth management tools are disaggregated by whether they are intended to promote or restrict growth,[9] it becomes clear that the ballot box is utilized much more frequently for anti-growth tools than pro-growth tools. Overall, there are a total of 372 anti-growth tools, which is more than double the number of pro-growth tools. An individual look at specific tools reveals that the only tool used more often to promote, rather than to inhibit growth, is zoning. Zoning tools are used to promote growth 51.4% of the time, as shown in Table 5.7. The remainder of tools are more likely to be used for anti-growth purposes. For example, over 90% of all housing/population caps, 88.6% of vote requirements, and 87% of infrastructure adequacy tools are anti-growth measures, as opposed to pro-growth measures. These are dramatic differences. Not only do anti-growth tools more frequently qualify for the ballots, but the majority of them also have a higher adoption rate than pro-growth tools. This is especially true for urban growth boundaries and vote requirements. When urban growth boundaries and vote requirements are used for growth restricting rather than promoting purposes, they are twice as likely to be adopted.

An examination of regional differences in the types of tools proposed and their adoption rate at the ballot box, revealed some interesting differences. Table 5.8 compares the distribution of specific tools within the two regions with the greatest number of ballot measures, Southern California and San Francisco Bay Area. The San Francisco Bay Area is more likely to adopt pro-growth commercial/industrial caps and zoning tools than the Southern California region, while Southern California cities are more likely to adopt anti-growth zoning tools. An example of an anti-growth zoning tool would be rezoning lots designated for residential use to open space. Southern California cities are also more

likely to adopt infrastructure adequacy ballot measures that are anti-growth, such as those that require new development to provide necessary public services or infrastructure. One of the most striking findings is that cities in the San Francisco Bay Area proposed the largest number of anti-growth urban growth boundaries, 24, and have an astounding adoption rate of 92%. Within the period of study, 18 cities in the San Francisco Bay Area have adopted UGBs. This is quite an astounding success rate. Housing/population caps in the San Francisco Bay Area also have a high chance of being approved by voters, 61.5% of the time. These regional variations in types of tools proposed and the rate at which voters adopt them suggest that these two regions have different concerns and pressures relating to growth. It appears that cities in the San Francisco Bay Area are interested in promoting commercial and industrial developments, while controlling housing and population growth. Cities in this region are effective in adopting urban growth boundaries to try to contain the physical expansion of places. Southern California cities' high success rate of adopting infrastructure related ballot measures suggests voters are concerned about public services and the supply of adequate infrastructure for new development. Southern California cities are also more likely than cities in the San Francisco Bay Area to change zoning to less intense uses, whereas San Francisco Bay Area cities are more successful at adopting measures that require more intense or higher density land-uses. This may reflect of Southern California's trend towards large lot zoning for single family homes and the limited developable land in the San Francisco Bay Area.

B. Logistic Regression Analyses Predicting the Proposal and Adoption of Anti-growth Policies

This regression analysis tests the four hypotheses, community status, growth pressures, metropolitan hierarchy, and strategic interaction, as presented in Chapter IV. The first set of logistic regression analyses attempts to determine which of the four hypotheses better predicts anti-growth ballot measure proposal (PROPOSE). The first model predicting PROPOSE (Model 1a) will contain only community status and control variables. Model 1b includes community status, in addition to, growth pressure variables. The strategic interaction variable is added in the third model, Model 1C. Finally, the full model, Model 1d, contains all the variables in the previous models along with a metropolitan hierarchy variable. The variables are included additively in clusters relating to each of the four hypotheses to determine the relative merits of each hypothesis. A correlation matrix of all variables in these models is presented in Appendix C.

The next set of logistic regression models test which of the four hypotheses better explains the adoption of anti-growth measures or ADOPT. The independent and control variables in these four models (Models 2a, Model 2b, Model 2c, and Model 2d) are the same as those in the PROPOSE models.[10]

1. Anti-growth Ballot Measure Proposal

The first model (Model 1a), with PROPOSE as the dependent variable, includes community status and control variables. Among the community status variables, the only

variable that performed as expected was HOMEOWNERSHIP (Table 5.9). Greater rates of homeownership increase the likelihood that cities will propose anti-growth measures. RES. STABILITY and LOW-INC X SUBURB, on the other hand, were both significant predictors of PROPOSE, but not as expected. Higher levels of residential stability in cities decrease the probability that cities will propose anti-growth ballot measures. The most surprising result is that low-income suburbs are 32 times more likely than high-income suburbs to propose anti-growth policies (Exp (β) = 3.474). The findings for HOMEOWNERSHIP and LOW-INCOME X SUBURB lend little support to the community status hypothesis.

Growth pressure variables are added to the community status and control variables to create Model 1b. When the growth pressure variables are included, the log-likelihood ratio statistics reveal that Model 1b is a significantly better fitting model than Model 1a ($p < .001$), as calculated by the likelihood ratio chi-square test (hereafter, LR chi-square,[11] as shown in Table 5.10. Overall, there was mixed support for the growth pressures hypothesis. Cities with greater white population increase (or conversely, smaller growth in minority population) and longer travel time to work are more likely to propose anti-growth measures, as expected. Change in population of individuals <18 years of age, which was included in the model as a proxy for school overcrowding, was significant, but negative (see Table 5.11). Therefore, a greater increase in the number of children in the population reduces the probability that cities will propose anti-growth measures. Although it was originally thought that greater increases in children population was a proxy for school overcrowding and that school overcrowding would increase support for growth management, it may be the case that greater numbers of

children in the jurisdiction signals more need for growth. Another explanation is that these places are growing in children population because they are more affordable and, therefore, do not have the desire to implement growth management. Thus, places with growing or stable children populations may not want to propose or adopt anti-growth measures that might inhibit growth. Population change, which is among the most common explanation for citizen support of growth control policies, was not significant. As found in Model 1a, low-income suburbs remain significantly more likely to propose anti-growth ballot measures than high-income suburbs. Unlike Model 1a, suburb is significant, and is negatively related to PROPOSE. Therefore, with growth pressure variables added to the model, suburbs are less likely to qualify anti-growth ballot measures. There could be several explanations for this finding. One explanation is perhaps growth management at the ballot box is not predominantly a suburban phenomenon. An alternate explanation is that suburbs already have growth management in place (through other mechanisms) and do not use the ballot box to manage growth.

Model 1C introduces the STRATEGIC INTERACTION variable. All of the main variables of concern (not the controls) that were significant in Model 1b remain significant in Model 1C and STRATEGIC INTERACTION is a highly significant and a strong predictor of PROPOSE. As shown in Table 5.12, for each additional neighboring city within the region having proposed an anti-growth measure, cities are 12 times more likely to propose an anti-growth measure. This suggests that growth decisions at the local level are influenced by growth politics within the region. Thus, cities make decisions based on what other cities within their region are doing. Examining the LR chi-square statistic shows that Model 1C is a significantly better fitting model than Model 1b

($p < .01$). It should be noted that the control variable, population size, is a highly significant variable throughout all the models. Small and medium sized cities are less likely to propose anti-growth measures than large cities.

The inclusion of METRO HIERARCHY in the final model (Model 1d) does not significantly improve the goodness of fit of the model ($p > .05$). The metropolitan hierarchy variable is not significant, as displayed in Table 5.13, therefore, there is little support for the contention that high status cities are more likely than lower status cities to utilize the political process (e.g. the ballot box) to pull up the drawbridge on unwanted growth and development. A comparison of all four models reveals that the best fitting model is Model 1C.

2. Anti-growth Ballot Measure Adoption

The same sets of independent variables are used in the following four logistic regression models to predict ADOPT. As in the previous four models, the independent variables will be added in clusters relating to the four hypotheses. Paralleling the results for the community status variables predicting PROPOSE, higher levels of residential stability is less likely and low-income suburbs are more likely to adopt anti-growth measures. The differences between this model, Model 2a, and Model 1a are that a greater proportion of whites in the population results in a greater probability of adopting anti-growth ballot measures and homeownership is not significant (see Table 5.14). The only significant variable in this model that performs as expected is White population.

In Model 2b, growth pressure variables are included in the model along with community status and control variables. The relationships between growth pressures variables in this model are the same as those in Model 1b. Population change is not significant, white population change and travel time to work is positively related, and change in children population is negatively related (see Table 5.15). Low-income suburbs are also more likely than high-income suburbs to adopt anti-growth measures. Unlike the PROPOSE growth pressure model (Model 1b), suburb is not significant and residential stability is highly significant, but in the opposite direction than expected. Greater residential stability is associated with lower odds of anti-growth ballot measure adoption. A higher proportion of whites in the city increase the likelihood of anti-growth ballot measure adoption. As in Model 1b, the results from the growth pressure variables provide some support for the growth pressure hypothesis. The LR chi-square statistic shows an improvement in the fit of this model over Model 2a ($p < .01$), see Table 5.16.

The results in Table 5.17 show that STRATEGIC INTERACTION is a highly significant variable. The greater number of neighboring cities within the region having anti-growth ballot measures influences cities to adopt anti-growth measures. The full model, with METRO HIERARCHY included does not significantly improve Model 2d over Model 2c, as evidenced by the LR chi-square statistic ($p > .05$). Therefore, Model 2c is the best fitting model among all the models with ADOPT as the dependent variable. The results from the full model, as revealed in Table 5.18, provide a complex picture of the predictors of anti-growth ballot measure adoption. The city characteristics that increase the odds of adopting anti-growth policies at the ballot box are: higher white population share, lower levels of residential stability, stable or growing white population,

less growth in children population, more regional anti-growth activity and if they are low-income suburbs.

An examination of both the full models (Model 1d and Model 2d) reveals both similarities and differences. The variables of interest that are significant in both models include: low-income by suburb, white population change, kid change and strategic interaction. The difference between the two full models is that 1) suburb is a significant (negative) predictor of PROPOSE, but not ADOPT, and 2) lower residential stability rates increase the probability of ADOPT, but not PROPOSE.

C. Logistic Regression Analyses Predicting Anti-growth Tool Adoption

The main goal of the logistic regression analysis is to determine if explanations for support of growth management differs when growth management tools are disaggregated. In other words, "Are there different explanations for support for growth management depending on the growth management tool specified?" It is predicted that there will be variations across predictors for different growth management tools. These independent variables will be regressed on seven dependent variables, representing the different tools. The first dependent variable, the adoption of anti-growth housing/population cap [HSGADPT], is coded '1' if a city adopted at least one anti-growth housing/population cap during the study period, 1986-2000, and '0' if it has not. The other dependent variables, the adoption of anti-growth commercial/industrial caps [COMADPT], infrastructure adequacy [INFADPT], urban growth boundary [UGBADPT], vote requirements [VOTEADPT], zoning [ZONEADPT], and general

controls [GENADPT] are dichotomous variables and are coded the same as HSGADPT. These seven logistic regression models (Models 3a-3g) will determine if any of the hypotheses, growth pressure, community status, strategic interaction, and metropolitan hierarchy, better explains the adoption of different growth management tools.

This analysis is a contribution to the literature because it will provide a better understanding of support for different growth management tools using one of the largest growth management tool databases within a single state to date. It is predicted that specifying the type of tool will make a difference in the explanations for why cities adopt anti-growth tools.

1. Tools Correlation Matrices

This next analysis involves constructing two correlation matrixes. The first correlation matrix, displayed in Table 5.19, examines the bivariate associations between different tools that are adopted by cities.[12] This matrix reveals that most tools are significantly (with low/moderate levels of association) and positively associated with one another. There were only three correlations that were not significant: commercial/industrial caps and housing/population caps, urban growth boundaries and commercial/industrial caps, and urban growth boundaries and infrastructure adequacy. It appears that cities are not likely to adopt these three sets of tools together. One reason that these tools are not compatible with one another may be that the adoption of these combinations of tools would place too much restriction on growth. For example, places that adopt urban growth boundaries, which are intended to stop the outward expansion of

land development may not want to additionally place a cap on commercial/industrial development because that would also limit the ability for upward (e.g. increased height and bulk) expansion, which is an alternative to outward expansion. The adoption of both of these tools in the same city would restrict growth outwards and upwards, thereby tremendously restricting the ability to grow in any capacity and would most likely affect economic development potentials.

The tools that have the highest positive association with one another are urban growth boundaries and vote requirements (r = .48), urban growth boundaries and population/housing caps (r = .36), and commercial/industrial caps and general controls (r = .37). Correlation coefficients are 0.478, 0.355 and 0.366, respectively. Their significant positive association with one another indicates that these tools are the most likely to be adopted together in the same city.

The difference between the first correlation matrix and the second is that the first matrix provides correlation coefficients for adopted tools, regardless of whether they are pro- or anti-growth, whereas, the second matrix specifically examines only anti-growth tools that are adopted. The correlations found in the second matrix are very similar to the first, except that infrastructure and commercial/industrial caps are no longer significantly correlated with one another (See Table 5.20). Otherwise, all the relationships remain the same in terms of their direction. It is interesting to note that urban growth boundaries and vote requirements tools that are anti-growth are even more highly correlated with one another (correlation coefficient of 0.503) than in the previous matrix. Understanding what tools are more likely to be used together and why others are not requires closer examination of individual cities and their growth management strategies.

2. The Adoption of Anti-growth Tools

This next analysis contains seven logistic regression models, containing seven different dependent variables representing the adoption of seven different tools. Table 5.21 provides descriptive statistics for the independent variables included in the multivariate analyses. As the descriptive statistics show, there are 15 cities that adopt housing/population caps, 16 cities that adopt commercial/industrial caps, and 8 cities that adopt infrastructure adequacy. Therefore, the analysis for these tools should be interpreted with caution as the low numbers of cities adopting may cause the coefficients to be unreliable or inflated. With this limitation in mind, the discussion of the multivariate analysis will focus on the tools that are more frequently adopted: UGBs, Vote Requirement, Zoning, and General Controls.

Taking a look at the individual regression analyses for the seven different tools, no variable appears to be a consistently significant predictor of support. Rather, there are different combinations of factors that predict the adoption of each anti-growth tool. This suggests that it is important to differentiate between the specific type of growth management tool when measuring citizen support.

There is strong evidence that support for urban growth boundaries (UGBs) is influenced by strategic interaction. That is, cities that are located in regions that are actively involved in regulating growth are more likely to adopt anti-growth UGBs. As seen in Model 3a in Table 5.22, every unit increase in strategic interaction increases the odds of adopting at least one anti-growth UGB by an astounding 489 times. This result

may be motivated by the fear of unwanted spillover growth from neighboring cities. Adopting an UGB can contain growth in order to prohibit development on the urban fringes and possible spillover growth from neighboring cities. Besides the strategic interaction hypothesis, there is not any strong evidence to support any of the other hypotheses (e.g. community status, growth pressure, or metropolitan hierarchy). Instead, there is an unexpected mix of variables that are significant predictors of support for UGBs. Contrary to what is expected, residential stability and kids change 1980-1990 are negatively related to support for UGBs. This suggests that cities that have more new residents and are decreasing in children population are more likely to adopt anti-growth UGBs.

Comparing the predictors of UGBs to those in the Vote Requirements model (see Model 3b in Table 5.23), there appears to be some similarities. In both the UGB and Vote Requirement models, the strategic interaction variable is highly significant, residential stability is negatively related, and white change is positively related. Also, cities with medium sized populations are more likely than cities with large populations to support both type of tools. Thus, the factors that are driving support for anti-growth UGBs are somewhat similar to those that drive Vote Requirements. The differences between predictors of support between these two tools are that suburbs are less likely to adopt anti-growth vote requirements, but suburb is not a significant predictor of the adoption of UGBs and cities with lower rates of growth in children population are more likely to adopt UGBs, which is not true for vote requirements.

The models for Zoning (Model 3c) and General Controls (Model 3d) provide little insight into citizen support. The only variable that is significant in both models is the

control variable, population size. In the zoning model (Table 5.24), cities with small populations are less likely than cities having large populations to adopt anti-growth zoning tools. Similarly, the general controls model finds that small and medium sized cities are less likely than large cities to adopt general controls intended to slow growth, see Table 5.25. Therefore, in both of these models, there is no support for any of the four hypotheses. These results suggest that more work needs to be conducted in order to understand support for these types of growth management tools.

Due to small variation in the dependent variable, the following results for housing/population caps and commercial/industrial caps should be interpreted with caution. The results for the housing/population cap model, Model 3e, reveal that the only significant predictor of support is the change in white population, as shown in Table 5.26. Stable or growing white populations are more likely to adopt anti-growth housing/population caps. Since this is the only significant variable in the model, it begs the questions: why do stable or growing white communities tend to adopt housing/population caps? It may be housing/population caps are a mechanism to maintain the current level of racial homogeneity among whites in the community.

The results for Model 3f, the commercial/industrial caps model, provide some support for the growth pressure hypothesis. This model, as shown in Table 5.27, finds that larger population growth and greater travel time to work is positively associated with the adoption of anti-growth commercial/industrial caps. For every minute increase in travel time to work, cities are 1.2 times more likely to adopt anti-growth commercial/industrial caps. Increasing population growth and large amounts of time spent commuting to work appears to influence voters decision to adopt anti-growth

commercial/industrial caps, which may be intended to slow down job growth and, consequently, curb traffic congestion.

Finally, the Infrastructure model (Model 3g in Table 5.28) provides little evidence to make any conclusions in support for any of the hypotheses. This is most likely due to the small number of cities that adopted anti-growth infrastructure tools, 8 out of 422. Therefore, it is not possible to make any reliable statements about what may predict the adoption of this tool.

D. Ordinary Least Squares Regression Analyses Predicting Housing and Socioeconomic Change

The OLS regression models in this next section tests the hypotheses relating to the effect of anti-growth policies on housing and socioeconomic outcomes. The hypotheses presented in Chapter IV are reiterated here briefly. First, it is predicted that cities that propose and adopt anti-growth policies are expected to have lower overall housing growth, a reduction in multi-family and rental housing, and an increase in single-family housing than cities that have not. Second, cities proposing and adopting anti-growth measures are hypothesized to have greater increases in white population and median household income, but lower rates of growth in Black and Hispanic populations. Only the regression coefficients that are significant at $p < .05$ will be considered significant in the following discussion.

Bivariate correlations were conducted for all independent variables and can be found in Appendix D. An examination of this matrix shows that there is no independent

variables that are in the same model are highly correlated with one another.[13] This alleviates concern about problems with multi-collinearity. The descriptive statistics in Table 5.29 reveal evidence of positive skewness among a number of the variables. After graphing distribution plots and confirming that positive skewness was present, variables with positive skewness were logged. The descriptive statistics for the transformed variables are shown in Table 5.30.[14] Due to the transformation of some of the dependent variables, the interpretations of the coefficients for these variables are less intuitive. Therefore, the discussion of the results for these variables will focus on the direction of the relationship (negative or positive) and whether they are statistically significant. All of the OLS Regression models were good fitting models with R^2 values ranging from .82 to .99.

1. Housing Change

The OLS regression analysis for housing change provides some surprising results. As shown in Table 5.31, of the four models that test the effect of growth management proposal (Models 4a, 4b, 4c, and 4d), the only model that has a significant coefficient for PROPOSE is HOUSING UNITS 00, but this result is not as expected. Cities that propose one or more anti-growth ballot measure(s) have more growth in housing than cities that did not. There was no significant effect of proposing anti-growth measures on multi-family, single-family, or rental-occupied housing as hypothesized.

Examining the effect of adopting anti-growth policies on housing change, there is no significant effect in any of the four models, Models 5a, 5b, 5c, and 5d (see Table

5.32). It appears that the adoption of anti-growth measures has no effect on housing outcomes. Rather, it is the proposal of anti-growth measures that is related to a greater housing increase.

2. Socioeconomic Change

There appears to be significant differences in the effects of proposing anti-growth measures at the ballot box on socioeconomic change. Cities that propose anti-growth measures have a greater increase in white population, as shown in Model 6c of Table 5.33. Cities that propose anti-growth measures compared to cities that did not have 1.5% greater white population, see Table 5.33. Conversely, cities qualifying anti-growth policies have lower Hispanic population growth (-1.2%) compared to cities that did not, see Model 6b in Table 5.33. The proposal of anti-growth measures was not associated with change in Black population or median income.

Similar to the results found in the housing change models, there is no significant effect of adopting anti-growth policies on socioeconomic change, as shown in Table 5.34. The insignificant effect of the adoption of anti-growth measures in all of the models (Models 7a-7d) suggests that it may not be the policy implementation of growth management that has an effect on outcomes, but the political stage (i.e. qualifying measures for the ballots), that alters housing and socioeconomic demographics of cities.

The results from the OLS regressions finds that cities proposing anti-growth policies have higher rates of housing growth, larger increases in White population and lower increases in Hispanic population. These findings suggest that places that are

attempting managing growth actually have higher housing growth. This suggests that while these places are more politically active in challenging growth, they may not be successful. In addition, these are places that are attractive to White populations and not attractive to Hispanic populations. An alternative view, as suggested by the hypotheses in Chapter IV is that growth management may have exclusionary effects on certain racial/ethnic minorities. In this case, the politics of growth management works to exclude Hispanics.

E. Summary

The results in this chapter reveal that the use of the ballot box to manage growth is a dynamic and evolving phenomenon that does not quite fit the mold of growth management as previously understood. It may be that growth management initiatives and referenda enacted by citizens is a much different political process and has different growth outcomes than growth management enacted by other methods.

This chapter reported the trends in growth management ballot measures and tools, which were qualified and adopted in California between 1986-2000. The trends in growth management tools indicate that growth management is not as pervasive as commonly believed. An overwhelming majority of local jurisdictions have not used the ballot box to manage growth. Of the jurisdictions that have, most have only proposed or adopted a small number. The trends also indicate a strong anti-growth agenda in California's local jurisdictions. In general, anti-growth ballot measures were more prevalent than pro-growth throughout the entire period of the study. It appears that anti-

growth measures had higher adoption rates in periods that coincided with state-wide economic growth, while pro-growth measures had greater adoption rates in the period in which the economy was recovering from a recession. There were also regional variations in the frequency and adoption rate of growth management ballot measures. The prevalence of growth management on the ballots in the Southern California and San Francisco Bay Area regions far outnumbered all other regions in the state. However, although the Central Coast region had fewer numbers of measures, the adoption rate was highest among all regions. The Central Valley distinguishes itself from other regions because it is the only one among the four major regions to have more pro-growth than anti-growth ballot measures. Furthermore, the Central Valley region has a higher adoption rate of pro-growth measures than all other regions.

The analysis of trends in growth management tools shows great variation in frequency and adoption rate. The two tools that appear on the ballots more frequently and have the highest adoption rates are Vote Requirement and UGBs. These tools also appear on the ballots in the same jurisdictions. The growing frequency and adoption of these two tools may be signaling a new wave of growth management strategies. As opposed to strict caps on population or commercial industrial development, which have become increasingly unpopular over time, Vote Requirement and UGBs appear to be the 'new wave' of growth management tools that are more geared towards directing where growth should occur rather than simply putting a cap on it. The results from this analysis also indicate that different regions throughout the state utilize different tools to attempt to manage growth. For example, comparing the San Francisco and Southern California regions, the San Francisco Bay Area has a high passage rate of UGBs and

Housing/Population Caps, whereas the Southern California region has a greater adopt rate of Infrastructure and Zoning. These findings suggest that growth politics and the methods of growth management that are adopted may be place specific.

This chapter also presented the results from two sets of logistic regression analyses. The first set of logistic regression models attempts to determine the predictors of anti-growth ballot measure proposal and adoption. The results from these regression analyses reveal that the politics of growth in California cities is not typical of what has been found in the past. There was little to no support for the community status and metropolitan hierarchy hypotheses, which indicates that growth politics at the ballot box is not controlled by high status elites, whether individually or collectively. On the contrary, low-income suburbs are much more likely than other types of places to propose anti-growth ballot measures. In fact, this was one of the most robust findings in all eight models. There was also very little evidence to substantiate the local growth pressures hypothesis. Population change and travel time to work were surprisingly not significant predictors of anti-growth policy proposal and adoption. Cities with higher rates of growth in white population were more likely to both propose and adopt anti-growth measures. Larger proportions of Whites in the population are also a significant predictor of the adoption of anti-growth measures. This suggests that racial composition and the changing dynamics of race within a population plays a significant role in local growth politics. The only hypothesis that garners strong support in the analysis is the strategic interaction hypothesis. This highlights the importance of understanding growth dynamics at the regional level and reveals that growth politics and policy at the local level are inextricably linked to the region. Rather than providing a clearer picture of the politics of

growth at the local level, the many unexpected results from this logistic regression analysis have raised even more questions.

A better understanding of why cities propose and adopt policies at the ballot box might be obtained by distinguishing between different types of anti-growth policies. This chapter provides an analysis of the predictors of seven specific tools: Housing/Population Caps, Commercial/Industrial Caps, Infrastructure Adequacy, UGBs, Vote Requirements, and Zoning. The results from these seven logistic regression models find that there are significant differences in the predictors that explain the adoption of different tools. For example, strategic interaction is a significant predictor of the adoption of UGBs and Vote Requirement, but not a significant predictor of any other anti-growth tools. The findings in this analysis point to the need to differentiate between different growth management tools.

This chapter includes an analysis of the effects that growth management has on housing and socioeconomic outcomes. There is mixed support for the 'chain of exclusion' hypothesis. Cities proposing anti-growth policies have larger increases in White population and lower increases in Hispanic population. But, there was no significant effect of growth management proposal or adoption on rates of multi-family or rental housing. The most surprising result from this analysis is that cities attempting to slow growth by qualifying anti-growth ballot measures actually had larger increases in housing growth. This finding, coupled with the insignificant relationship between anti-growth ballot measure adoption and housing growth, suggests that these places may not be successful at adopting anti-growth policies (and subsequently reduce housing growth) even though they qualify ballot measures.

The results from this chapter indicate that the use of the initiative and referenda process for growth management is motivated by different factors and the outcomes are much different than growth management adopted by other methods (e.g. through routine planning practices or local government officials) as discussed in the literature. Some theoretical and policy implications of this research will be explored in the next chapter.

ENDNOTE

[1] Counties in the Southern California region include: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura, Imperial, and Inyo.

[2] The San Francisco Bay Area consists of the following counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.

[3] The Central Valley counties consist of: Calaveras, Fresno, Kern, Kings, Madera, Merced, San Joaquin, Siskiyou, Stanislaus, Sutter, Tulare, and Yolo.

[4] The results for this t-test are: $t = 3.90$, $p < .001$.

[5] The results for this t-test are: $t = -5.24$, $p < .001$.

[6] Three different post-hoc tests were performed to determine which of the three categories of cities was significantly different from one another. The post-hoc tests include: Tukey, Sheffe, and Bonferroni. All of these tests provided the same results. Therefore, only the results for Tukey's post-hoc test are reported in Appendix B.

[7] As stated in a previous footnote, the Southern California region contains Los Angeles county and all counties to the South and East.

[8] The Central Coast region refers to coastal counties bounded by Santa Barbara to the south and Santa Cruz to the north.

[9] Tools that are intended to promote growth are labeled pro-growth and tools that attempt to slow or halt growth are considered anti-growth. All tools are either pro- or anti-growth. An example of the difference between pro- and anti-growth tool is as follows: if a zoning measure increases the permitted densities so that more housing or commercial/industrial units can be developed, this is considered to be a pr-growth zoning tool. If a measure downzones or rezones a lot so that it is used for less intense purposes, then this is considered an anti-growth tool.

[10] A bivariate correlation analysis, including all of the variables in the propose and adopt models, was conducted and the matrix indicates that there are no variables with correlations greater than .70, therefore, this decreases the chances that multi-collinearity exists in any of these models. This analysis is found in Appendix C.

[11] To determine whether the full model is a better fitting model than the nested model, Long (1997) states that a likelihood ratio chi-square test should be conducted. This test involves subtracting the -2 log likelihood ratio of the restricted model from the -2 log likelihood ratio of the full model. The difference is distributed as a chi-square ($X^{2)}$. Significance values can be determined by examining the X^2 distribution table and by calculating the difference in degrees of freedom between the full model and the restricted model. This test is also called a "goodness of fit" test.

[12] These are bivariate correlations of dichotomous variables, therefore, the correlation coefficients represent the rate that the two variables that are being correlated (i.e. growth management tools) are found within the same city.

[13] The correlation matrix does show some independent variables as highly correlated with one another ($r > .70$), but these variables are not included in the same models. For example, single-family housing 00 and multi-family housing 00 are correlated at $r = .946$, but these two independent variables are not included as independent variables in the same OLS models.

[14] The only variable that was not logged, even though there was evidence of positive skewness, is employment change 1980-1990. The reason for this is that when the variable was logged, the transformed variable did not improve the fit of the model or significantly alter the results. Therefore, this variable was left in its original form.

Figure 5.1: Number of Ballot Measures Proposed by Year (n=436)

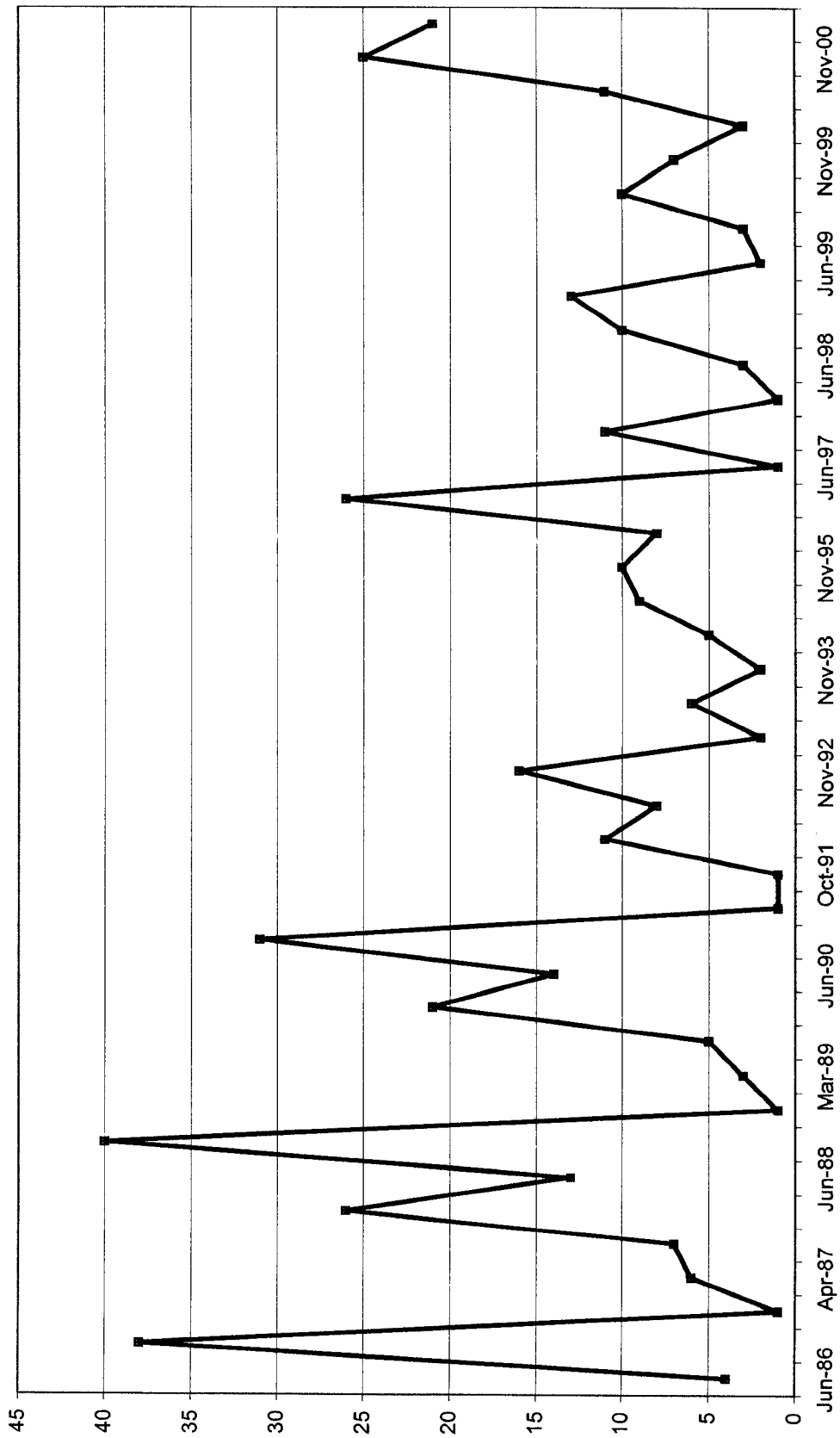

Figure 5.2: Pro- and Anti-Growth Ballot Measures Proposed by Year

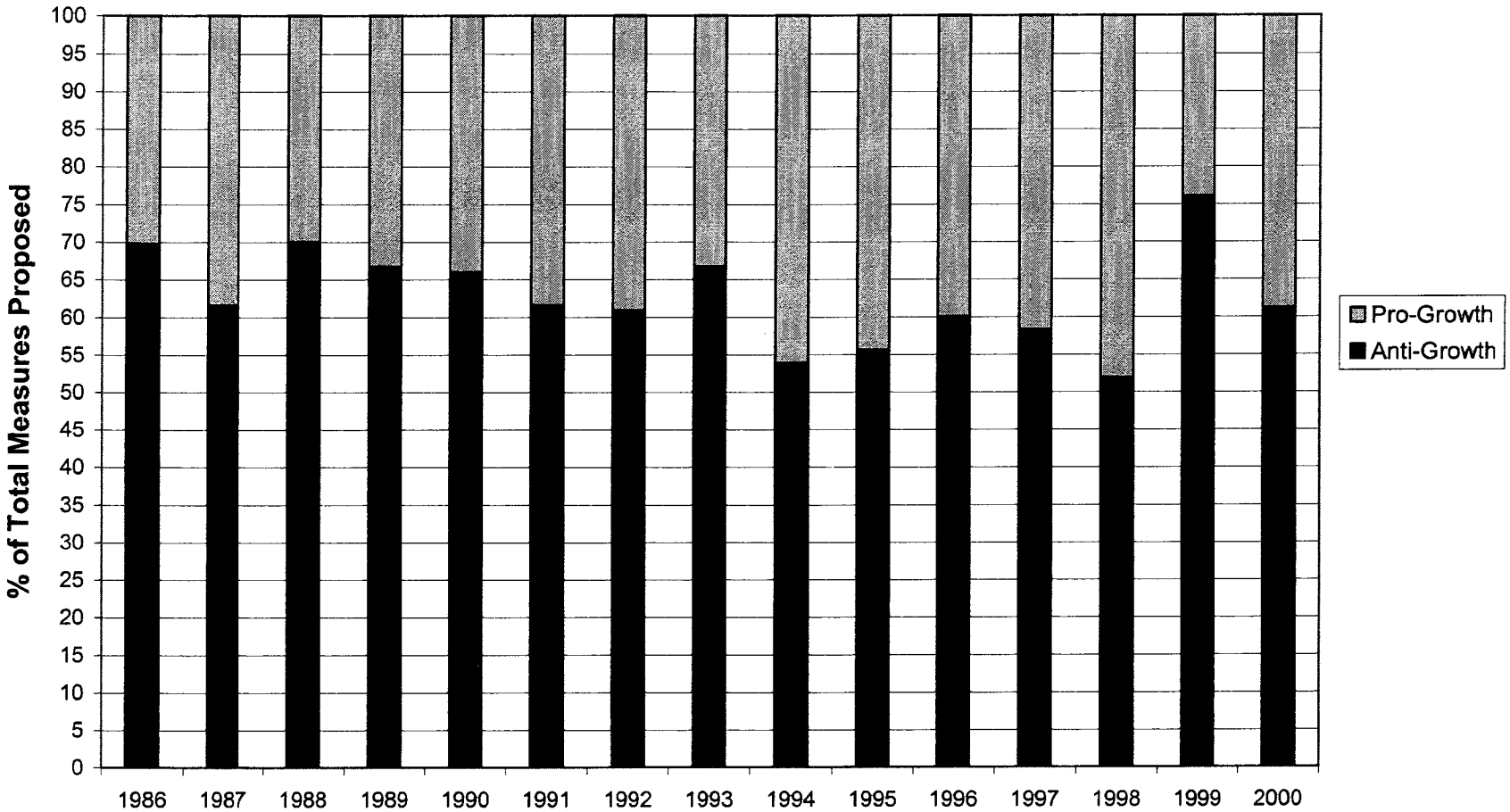

Figure 5.3: Pro- and Anti-Growth Measures Adopted by Year

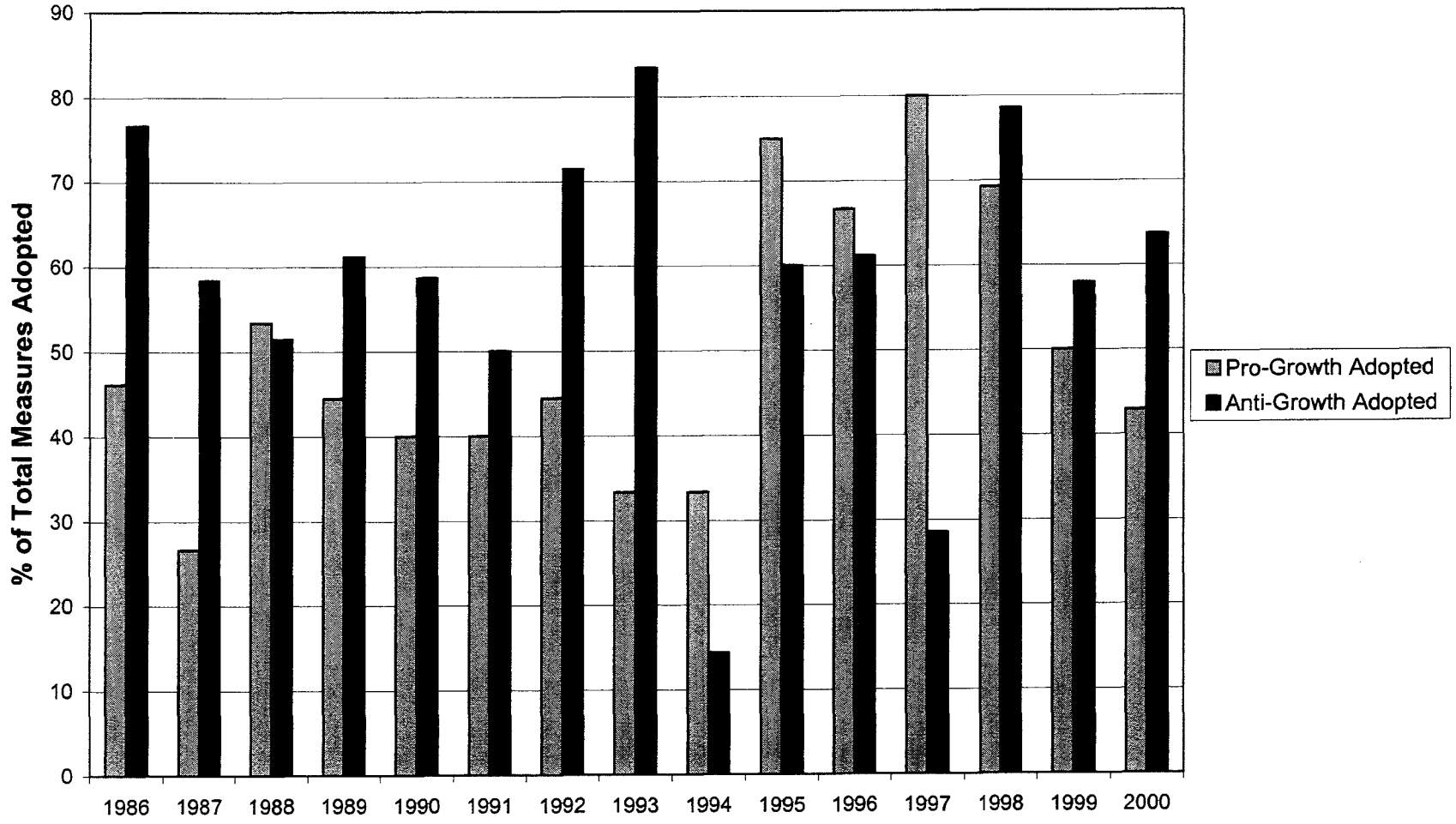

Table 5.1: Region by Pro- and Anti-Growth Measures

	# Pro-Growth	% Pro-Growth Adopted	# Anti-Growth	% Anti-Growth Adopted	All Measures
San Francisco Bay Area	44	54.55%	96	62.50%	140
Southern California	71	47.89%	138	61.59%	209
Central Valley	24	29.17%	12	25.00%	36
Central Coast	11	63.64%	16	75.00%	27
Other	1	100.00%	5	40.00%	6
Total	151	59.05%	267	52.82%	418

Table 5.2: Descriptive Statistics of Cities with No Anti-Growth Measures, Proposed & Failed, and Proposed and Adopted

	No Measures		Failed		Adopted		All Cities	
	N	Mean	N	Mean	N	Mean	N	Mean
Suburb (=1)	314	0.49	24	0.66	84	0.70	422	0.54
White 1980	314	69.32	24	75.91	84	78.03	422	71.43
Homeownership	314	60.17	24	65.96	84	58.94	422	60.26
Residential Stability	314	45.76	24	45.20	84	42.80	422	45.08
Median Income (1995$)	314	40035.07	24	48931.18	84	44711.09	422	41471.78
Pop Ch 1980-90	314	32.58	24	38.77	84	36.09	422	33.63
White Ch 1980-90	314	-9.29	24	-6.88	84	-7.45	422	-8.79
Kid Ch 1980-90	314	-0.76	24	-1.57	84	-2.15	422	-1.08
Travel 1980	314	19.35	24	22.33	84	22.30	422	20.10
Strategic Interaction	314	6.36	24	6.53	84	8.32	422	0.25
Metropolitan Hierarchy	314	2.98	24	3.33	84	3.07	422	3.02
Kids 1980	314	28.37	24	26.06	84	25.49	422	27.66
Seniors 1980	314	11.72	24	11.59	84	11.12	422	11.59
Pop 1980	314	28003.16	24	26099.96	84	100999.75	422	42425.05

Table 5.3: Total # of Tools Qualified in Each City

# of Tools	# of Cities
0	317
1	53
2	32
3	21
4	15
5	11
6	6
7	3
8	1
9	2
10	2
11	4
12	3
14	1
24	1
25	1
32	1
Total	474

Table 5.4: Total Number of Different Types of Tools Qualified and Adopted

Tools Qualified	# Cities	Tools Adopted	# Cities
0	317	0	358
1	65	1	49
2	43	2	39
3	28	3	17
4	7	4	9
5	8	5	2
6	4	6	0
7	2	7	0
Total Cities	474		474

Table 5.5: Adoption Rate of Tools by Type

	# Tools Qualified	% Adopted
Hsg/Pop Caps	45	40.0%
Comm/Ind Caps	45	53.0%
Infrastructure	23	39.0%
UGBs	65	68.0%
Vote	108	58.0%
Zoning	113	45.0%
General	147	52.0%
Other	27	37.0%
Total	573	50.3%

Figure 5.4: Tools Qualified by 5-Year Interval

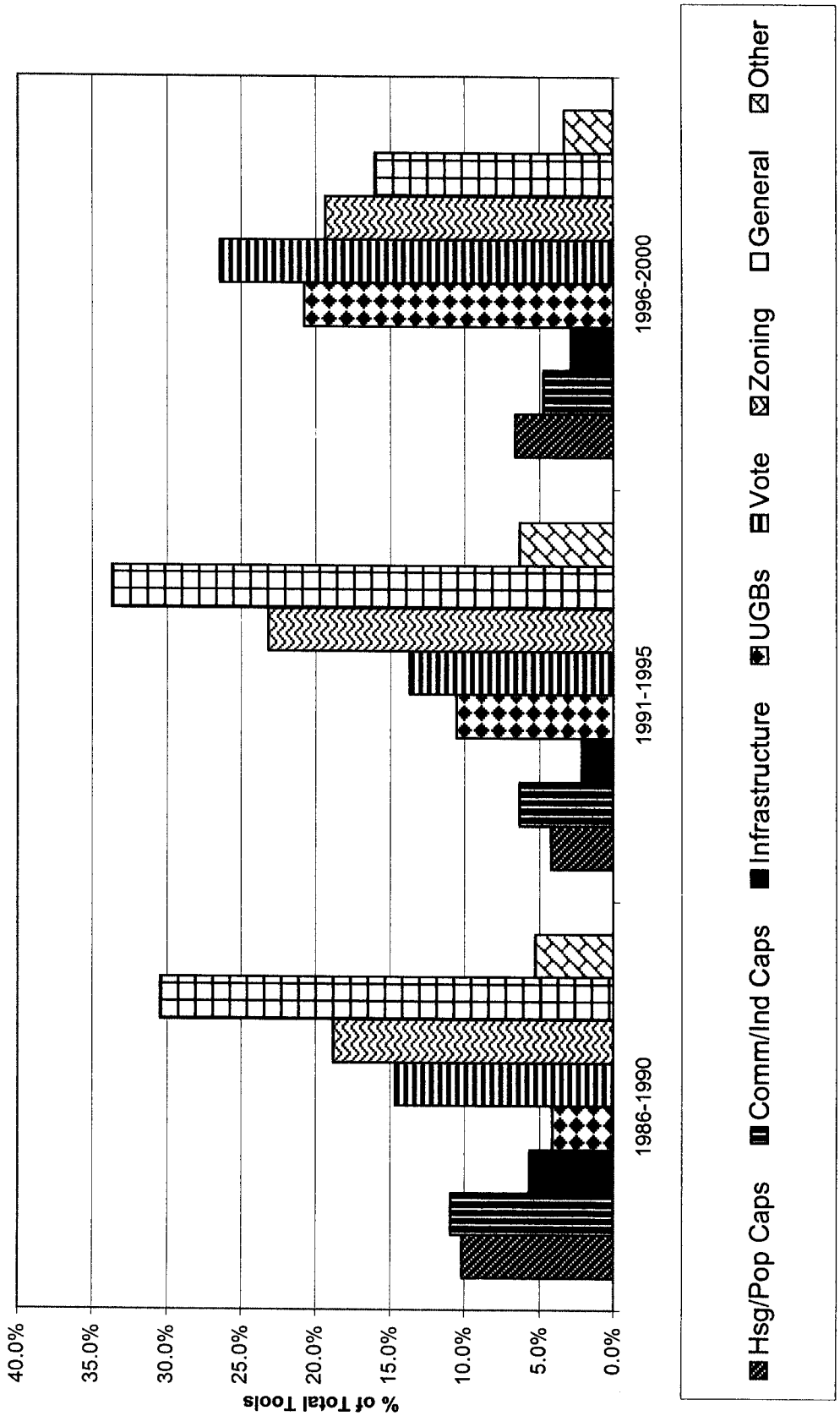

Table 5.6: Adoption Rate of Tools by Region

Region	# of Cities	# of Tools	Adoption Rate
Southern California	75	287	57.9%
San Francisco Bay Area	55	194	63.4%
Central Coast	10	29	59.2%
Central Valley	14	56	43.4%
Other	4	7	12.5%
Total	158	573	47.3%

Table 5.7: Adoption Rate of Pro- and Anti-Growth Tools by Type

	Pro-Growth Tools*			Anti-Growth Tools			
	# of Tools	% of Total	Adoption Rate	# of Tools	% of Total	Adoption Rate	Total
Hsg/Pop Caps	4	9.1%	50.0%	40	90.9%	42.5%	44
Comm/Ind Caps	15	33.3%	60.0%	30	66.7%	60.0%	45
Infrastructure	3	13.0%	33.3%	20	87.0%	40.0%	23
UGBs	16	25.4%	37.5%	47	74.6%	74.5%	63
Vote	12	11.4%	33.3%	93	88.6%	63.4%	105
Zoning	57	51.4%	42.1%	54	48.6%	40.7%	111
General	66	47.1%	51.5%	74	52.9%	64.9%	140
Other	9	39.1%	33.3%	14	60.9%	50.0%	23
Total	182	32.9%	42.6%	372	67.1%	54.5%	554

* Pro-Growth Tools are measures that are intended to allow for more growth in population or development. An example of a pro-growth population/housing cap measure is one that increases a current housing or population cap.

Table 5.8: Pro- and Anti-Growth Tools by Type of Tool and Region

	Pro-Growth Tools				Anti-Growth Tools			
	Southern California		San Francisco Bay Area		Southern California		San Francisco Bay Area	
Pro-Growth Tools:	**# Proposed**	**% Adopted**	**# Proposed**	**% Adopted**	**# Proposed**	**% Adopted**	**# Proposed**	**% Adopted**
Hsg/Pop Caps	3	66.7%	1	0.0%	18	44.4%	13	61.5%
Comm/Ind Caps	7	57.1%	7	71.4%	15	60.0%	14	57.1%
Infrastructure	1	0.0%	2	50.0%	13	53.8%	6	16.7%
UGBs	11	27.3%	3	33.3%	18	55.6%	24	91.7%
Vote	6	33.3%	6	33.3%	52	69.2%	29	62.1%
Zoning	24	33.3%	18	55.6%	27	48.1%	20	35.0%
General	28	67.9%	12	66.7%	34	61.8%	33	63.6%
Other	8	37.5%	1	0.0%	12	50.0%	1	0.0%
Total	88	40.4%	50	38.8%	189	55.4%	140	48.5%

Table 5.9: Model 1a: Community Status Logistic Regression Model
Dependent Variable: Propose

	B	S.E.	Odds Ratio
Suburb = 1	-1.448	0.891	0.235
White 1980	0.018	0.012	1.018
Residential Stability	-0.060**	0.018	0.941
Homeownership	0.043**	0.016	1.044
Low Income 1980	-1.483	0.998	0.227
Middle Income 1980	0.621	0.461	0.864
Low Income by Suburb	3.474**	1.14	32.269
Middle Income by Suburb	-0.766	0.977	2.152
Small City	-1.547**	0.423	0.213
Medium City	-0.910**	0.311	0.403
Kids 1980	-0.120**	0.043	0.887
Seniors 1980	-0.067	0.035	0.935
LA Region	-0.900**	0.321	0.407
Central Valley	-2.066**	0.576	0.127
Other Region	-1.337**	0.447	0.263
Constant	2.719	1.733	64.535
n	422		
-2 Loglikihood Ratio	375.269		

*p<.05 **p<.01

Table 5.10: Likelihood Ratio Chi-Square Test for 'PROPOSE' Models

	LLR ($Model_i$) - LLR ($Model_j$)	df	p-value
Model 1b - Model 1a	25.866	4	$p < .001$
Model 1c - Model 1b	10.23	1	$p < .01$
Model 1d - Model 1c	0.438	1	n.s.

Table 5.11: Model 1b: Growth Pressures Logistic Regression Model
Dependent Variable: Propose

	B	S.E.	Odds Ratio
Suburb = 1	-1.943*	0.987	0.143
White 1980	0.017	0.012	1.017
Residential Stability	-0.049	0.026	0.952
Homeownership	0.020	0.018	1.021
Low Income 1980	-1.464	1.083	0.231
Middle Income 1980	-0.082	1.015	0.921
Low Income by Suburb	3.887**	1.229	48.783
Middle Income by Suburb	0.969	1.059	2.636
Pop Change 1980-1990	0.007	0.005	1.007
White Change 1980-1990	0.079**	0.027	1.083
Kids Change 1980-1990	-0.164**	0.063	0.848
Travel Time to Work	0.087*	0.039	1.091
Low Pop	-1.909**	0.472	0.148
Medium Pop	-1.130**	0.337	0.323
Kids 1980	-0.113*	0.044	0.893
Seniors 1980	-0.031	0.036	0.969
LA Region	-0.610	0.34	0.544
Central Valley Region	-1.465*	0.634	0.231
Other Region	-1.014*	0.507	0.363
Constant	1.096	2.05	20.892
n	422		
-2 Loglikihood Ratio	349.403		

*p<.05 **p<.01

Table 5.12: Model 1c: Strategic Interaction Logistic Regression Model
Dependent Variable: Propose

	B	S.E.	Odds Ratio
Suburb = 1	-2.125*	1.042	0.119
White 1980	0.014	0.012	1.014
Residential Stability	-0.035	0.027	0.965
Homeownership	0.018	0.018	1.018
Low Income 1980	-1.398	1.131	0.247
Middle Income 1980	-.232	1.061	0.793
Low Income by Suburb	3.702**	1.281	40.515
Middle Income by Suburb	1.018	1.109	2.767
Pop Change 1980-1990	0.008	0.005	1.008
White Change 1980-1990	0.077**	0.027	1.08
Kids Change 1980-1990	-0.154*	0.065	0.857
Travel Time to Work	0.081*	0.040	1.084
Strategic Interaction	2.487**	0.783	12.031
Low Pop	-1.756**	0.483	0.173
Medium Pop	-1.044**	0.343	0.352
Kids 1980	-0.125**	0.046	0.882
Seniors 1980	-0.041	0.038	0.96
LA Region	-0.202	0.363	0.817
Central Valley Region	-0.735	0.671	0.48
Other Region	-0.738	0.519	0.478
Constant	0.122	2.107	9.459
n	422		
-2 Loglikihood Ratio	339.173		

*p<.05 **p<.01

Table 5.13: Model 1d: Metropolitan Hierarchy Logistic Regression Model
Dependent Variable: Propose

	B	S.E.	Odds Ratio
Suburb = 1	-2.066*	1.045	0.127
White 1980	0.016	0.013	1.016
Residential Stability	-0.034	0.027	0.967
Homeownership	0.023	0.019	1.023
Low Income 1980	-1.549	1.155	0.212
Middle Income 1980	-.233	1.061	0.792
Low Income by Suburb	3.701**	1.281	40.506
Middle Income by Suburb	0.937	1.116	2.552
Pop Change 1980-1990	0.009	0.005	1.009
White Change 1980-1990	0.079**	0.028	1.082
Kids Change 1980-1990	-0.163*	0.067	0.85
Travel Time to Work	0.076	0.041	1.079
Strategic Interaction	2.421**	0.789	11.254
Metropolitan Hierarchy	-0.121	0.182	0.886
Low Pop	-1.770**	0.484	0.17
Medium Pop	-1.047**	0.344	0.351
Kids 1980	-0.126**	0.046	0.881
Seniors 1980	-0.046	0.039	0.955
LA Region	-0.148	0.372	0.862
Central Valley Region	-0.591	0.706	0.554
Other Region	-0.589	0.566	0.555
Constant	0.237	2.110	10.012
n	422		
-2 Loglikihood Ratio	338.735		

*p<.05 **p<.01

Table 5.14: Model 2a: Community Status Logistic Regression Model
Dependent Variable: Adopt

	B	S.E.	Odds Ratio
Suburb = 1	-1.231	0.874	0.292
White 1980	0.031*	0.013	1.031
Residential Stability	-0.063**	0.019	0.939
Homeownership	0.026	0.017	1.026
Low Income 1980	-.961	1.017	0.382
Middle Income 1980	-.055	0.939	0.947
Low Income by Suburb	2.732*	1.163	15.359
Middle Income by Suburb	0.814	0.979	2.258
Small City	-1.790**	0.479	0.167
Medium City	-0.985**	0.330	0.374
Kids 1980	-0.084	0.046	0.92
Seniors 1980	-0.059	0.037	0.943
LA Region	-0.597	0.343	0.55
Central Valley	-2.359**	0.680	0.095
Other Region	-1.203*	0.478	0.3
Constant	1.383	1.898	13.652
n	422		
-2 Loglikihood Ratio	330.525		

*p<.05 **p<.01

Table 5.15: Model 2b: Growth Pressures Logistic Regression Model
Dependent Variable: Adopt

	B	S.E.	Odds Ratio
Suburb = 1	-1.670	0.975	0.188
White 1980	0.027*	0.013	1.027
Residential Stability	-0.076**	0.028	0.927
Homeownership	0.006	0.019	1.006
Low Income 1980	3.066*	1.255	0.486
Middle Income 1980	.182	1.03	1.200
Low Income by Suburb	3.066*	1.255	21.448
Middle Income by Suburb	1.030	1.069	2.802
Pop Change 1980-1990	0.004	0.005	1.004
White Change 1980-1990	0.081**	0.029	1.084
Kids Change 1980-1990	-0.229**	0.067	0.795
Travel Time to Work	0.086*	0.043	1.089
Low Pop	-2.089**	0.524	0.124
Medium Pop	-1.155**	0.356	0.315
Kids 1980	-0.075	0.046	0.928
Seniors 1980	-0.012	0.038	0.989
LA Region	-0.248	0.370	0.780
Central Valley Region	-1.794*	0.743	0.166
Other Region	-0.979	0.548	0.376
Constant	0.538	2.184	9.104
n	422		
-2 Loglikihood Ratio	303.773		

*p<.05 **p<.01

Table 5.16: Likelihood Ratio Chi-Square Test for 'ADOPT' Models

	$LLR(Model_i) - LLR(Model_j)$	df	p-value
Model 2b - Model 2a	26.752	4	$p < .001$
Model 2c - Model 2b	7.647	1	$p < .01$
Model 2d - Model 2c	0.385	1	n.s.

Table 5.17: Model 2c: Strategic Interaction Logistic Regression Model
Dependent Variable: Adopt

	B	S.E.	Odds Ratio
Suburb = 1	-1.716	1.028	0.180
White 1980	0.025	0.014	1.025
Residential Stability	-0.062*	0.029	0.940
Homeownership	0.003	0.019	1.003
Low Income 1980	-.480	1.168	0.619
Middle Income 1980	.186	1.08	1.204
Low Income by Suburb	2.695*	1.307	14.811
Middle Income by Suburb	0.938	1.122	2.555
Pop Change 1980-1990	0.005	0.005	1.005
White Change 1980-1990	0.077*	0.03	1.080
Kids Change 1980-1990	-0.220**	0.069	0.802
Travel Time to Work	0.080	0.044	1.084
Strategic Interaction	2.308**	0.838	10.052
Low Pop	-1.943**	0.533	0.143
Medium Pop	-1.045**	0.361	0.352
Kids 1980	-0.084	0.048	0.919
Seniors 1980	-0.021	0.04	0.979
LA Region	0.113	0.391	1.119
Central Valley Region	-1.145	0.783	0.318
Other Region	-0.785	0.557	0.456
Constant	-0.436	2.241	3.598
n	422		
-2 Loglikihood Ratio	296.126		

*p<.05 **p<.01

Table 5.18: Model 2d: Metropolitan Hierarchy Logistic Regression Model
Dependent Variable: Adopt

	B	S.E.	Odds Ratio
Suburb = 1	-1.664	1.023	0.189
White 1980	0.027	0.014	1.027
Residential Stability	-0.061*	0.029	0.941
Homeownership	0.007	0.021	1.007
Low Income 1980	-.632	1.191	0.532
Middle Income 1980	.186	1.075	1.204
Low Income by Suburb	2.697*	1.302	14.835
Middle Income by Suburb	0.860	1.122	2.364
Pop Change 1980-1990	0.005	0.005	1.005
White Change 1980-1990	0.079**	0.030	1.082
Kids Change 1980-1990	-0.230**	0.071	0.794
Travel Time to Work	0.075	0.044	1.078
Strategic Interaction	2.245**	0.843	9.439
Metropolitan Hierarchy	-0.123	0.198	0.884
Low Pop	-1.954**	0.534	0.142
Medium Pop	-1.052**	0.362	0.349
Kids 1980	-0.085	0.048	0.918
Seniors 1980	-0.026	0.041	0.974
LA Region	0.170	0.401	1.186
Central Valley Region	-1.003	0.816	0.367
Other Region	-0.647	0.60	0.524
Constant	-0.316	2.246	3.852
n	422		
-2 Loglikihood Ratio	295.741		

*p<.05 **p<.01

Table 5.19: Correlation Matrix of Tools Adopted

	Hsg/Pop Caps	Comm/Ind Caps	Infrastructure	UGBs	Vote	Zoning	General
Hsg/Pop Caps	1	-0.037	0.231**	0.355**	0.196**	0.157**	0.170**
Comm/Ind Caps	-0.037	1	0.134**	0.073	0.142**	0.182**	0.336**
Infrastructure	0.231**	0.134**	1	0.081	0.149**	0.183**	0.107*
UGBs	0.355**	0.073	0.081	1	0.478**	0.185**	0.205**
Vote	0.196**	0.142**	0.149**	0.478**	1	0.263**	0.240**
Zoning	0.157**	0.182**	0.183**	0.185**	0.263**	1	0.256**
General	0.170**	0.336**	0.107*	0.205**	0.240**	0.256**	1

* $p < .05$ **$p < .01$

Table 5.20: Correlation Matrix of Anti-Growth Tools Adopted

	Hsg/Pop Caps	Comm/Ind Caps	Infrastructure	UGBs	Vote	Zoning	General
Hsg/Pop Caps	1	-0.034	0.257**	0.349**	0.213**	0.142**	0.172**
Comm/Ind Caps	-0.034	1	0.066	-0.001	0.126**	0.251**	0.381**
Infrastructure	0.257**	0.066	1	0.033	0.222**	0.217**	0.145**
UGBs	0.349**	-0.001	0.033	1	0.503**	0.204**	0.183**
Vote	0.213**	0.126**	0.222**	0.503**	1	0.201**	0.259**
Zoning	0.142**	0.251**	0.217**	0.204**	0.201**	1	0.213**
General	0.172**	0.381**	0.145**	0.183**	0.259**	0.213**	1

*p < .05 **p < .01

Table 5.21: Descriptive Statistics of Cities by Tools Adopted

	Hsg/Pop Caps				Comm/Ind Caps				Infrastructure			
	Did Not Adopt		Adopted		Did Not Adopt		Adopted		Did Not Adopt		Adopted	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Suburb (=1)	0.52	0.50	0.75	0.45	0.52	0.50	0.61	0.50	0.52	0.50	0.78	0.44
White 1980	71.16	22.25	78.74	8.14	71.28	22.23	74.86	13.48	71.29	22.11	77.80	11.31
Homeownership	59.99	14.00	67.64	9.78	60.66	13.59	50.72	18.51	60.35	13.96	56.17	12.61
Residential Stability	45.19	9.53	42.04	9.49	45.05	9.53	46.08	10.04	45.21	9.55	39.02	7.26
Median Income (1995$)	41226	18087	48144	14531	41232	17873	47177	20673	41474	18178	41370	6370
Pop Ch 1980-90	33.25	43.56	43.92	28.92	34.17	43.65	20.72	26.09	33.21	43.12	52.88	42.14
White Ch 1980-90	-8.93	6.60	-4.99	3.43	-8.82	6.65	-8.05	3.37	-8.79	6.57	-8.63	5.83
Kid Ch 1980-90	-1.01	3.17	-3.01	3.48	-1.03	3.23	-2.26	2.13	-1.08	3.23	-1.08	1.32
Travel 1980	20.01	5.25	22.73	5.38	19.99	5.29	22.77	3.83	20.09	5.31	20.67	2.45
Strategic Interaction	0.24	0.20	0.49	0.20	0.25	0.21	0.30	0.22	0.25	0.21	0.45	0.24
Metropolitan Hierarchy	2.99	1.38	3.73	0.88	3.03	1.37	2.71	1.31	3.02	1.37	2.89	1.54
Kids 1980	27.59	6.43	29.72	4.24	27.83	6.34	23.56	5.81	27.75	6.39	23.66	4.14
Seniors 1980	11.68	6.07	9.29	4.18	11.65	6.08	10.21	4.45	11.56	6.07	12.93	2.82
Pop 1980	42806	163106	32077	21690	31459	52053	303682	729109	40782	158868	117826	211680
No. of Cities	407		15		406		16		414		8	

Table 5.21 Cont.: Descriptive Statistics of Cities by Tools Adopted

	UGB				Vote				Zoning			
	Did Not Adopt		Adopted		Did Not Adopt		Adopted		Did Not Adopt		Adopted	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Suburb (=1)	0.53	0.50	0.47	0.51	0.51	0.50	0.62	0.49	0.50	0.50	0.74	0.44
White 1980	70.79	22.39	79.53	13.04	70.62	22.46	78.91	14.67	71.13	22.32	74.58	17.41
Homeownership	60.08	14.22	62.49	9.59	60.39	14.01	59.04	13.31	60.30	13.67	59.81	16.73
Residential Stability	45.27	9.73	42.81	6.39	45.47	9.72	41.98	7.27	45.23	9.56	43.44	9.29
Median Income (1995$)	41346	18484	43060	10221	41174	18553	44240	11539	40956	17992	47006	17428
Pop Ch 1980-90	33.79	44.62	31.65	15.53	33.84	44.66	31.70	25.24	32.58	38.19	44.86	78.76
White Ch 1980-90	-8.98	6.67	-6.38	4.11	-9.04	6.73	-6.42	3.95	-8.80	6.58	-8.64	6.28
Kid Ch 1980-90	-0.97	3.18	-2.45	3.13	-0.95	3.20	-2.33	3.00	-0.99	3.19	-2.05	3.18
Travel 1980	19.95	5.24	22.07	5.32	19.88	5.30	22.21	4.51	19.91	5.29	22.19	4.64
Strategic Interaction	0.23	0.20	0.51	0.19	0.23	0.19	0.46	0.22	0.24	0.21	0.35	0.22
Metropolitan Hierarchy	3.00	1.39	3.23	1.15	3.01	1.39	3.15	1.24	3.01	1.38	3.11	1.28
Kids 1980	27.67	6.41	27.55	5.89	27.94	6.32	25.13	6.39	27.81	6.34	26.11	6.56
Seniors 1980	11.58	5.72	11.74	9.17	11.57	6.03	11.81	6.03	11.67	6.04	10.79	5.81
Pop 1980	38503	157912	91890	182782	36679	156316	95818	186723	40654	164057	61420	111216
No. of Cities	392		30		372		50		402		20	

Table 5.21 Cont.: Descriptive Statistics of Cities by Tools Adopted

	General			
	Did Not Adopt		Adopted	
	Mean	S.D.	Mean	S.D.
Suburb (=1)	0.51	0.50	0.63	0.49
White 1980	70.91	22.36	76.26	17.07
Homeownership	60.50	13.72	57.98	15.83
Residential Stability	45.24	9.54	43.74	9.53
Median Income (1995$)	41059	18059	45310	17228
Pop Ch 1980-90	33.63	42.47	33.64	49.54
White Ch 1980-90	-8.92	6.73	-7.51	4.39
Kid Ch 1980-90	-1.01	3.26	-1.76	2.49
Travel 1980	19.94	5.32	21.56	4.53
Strategic Interaction	0.24	0.21	0.35	0.19
Metropolitan Hierarchy	3.03	1.39	2.93	1.23
Kids 1980	28.03	6.23	24.29	6.72
Seniors 1980	11.51	5.77	12.34	8.05
Pop 1980	38092	159420	82690	164169
No. of Cities	385		37	

Table 5.22: Model 3a: Urban Growth Boundaries Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	-2.636	1.49	0.072
White 1980	0.054	0.032	1.055
Residential Stability	-0.180*	0.079	0.835
Homeownership	0.047	0.048	1.048
Low Income 1980	1.365	1.788	3.916
Middle Income 1980	0.363	1.576	1.437
Low Income by Suburb	2.349	1.923	10.479
Middle Income by Suburb	0.822	1.832	2.274
Pop Change 1980-1990	-0.023	0.019	0.978
White Change 1980-1990	0.139	0.068	1.149
Kids Change 1980-1990	-0.337	0.158	0.714
Travel Time to Work	0.059	0.095	1.061
Strategic Interaction	6.194**	1.599	489.6
Metropolitan Hierarchy	-0.229	0.443	0.796
Low Pop	-2.912**	1.08	0.054
Medium Pop	-2.392**	0.845	0.091
Kids 1980	0.181	0.106	1.199
Seniors 1980	0.122	0.076	1.13
LA Region	-0.339	0.712	0.712
Central Valley Region	-1.221	1.326	0.295
Other Region	-4.116**	1.357	0.016
Constant	-7.193	5.888	0.001
N	422		
-2 Log Likihood Ratio	95.616		

*p<.05 **p<.01

Table 5.23: Model 3b:Vote Requirement Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	-2.425*	1.128	0.088
White 1980	-0.001	0.02	0.999
Residential Stability	-0.112*	0.048	0.894
Homeownership	0.014	0.031	1.014
Low Income 1980	-2.279	1.48	0.102
Middle Income 1980	0.079	1.197	1.082
Low Income by Suburb	2.196	1.789	8.993
Middle Income by Suburb	0.703	1.269	2.019
Pop Change 1980-1990	-0.002	0.01	0.998
White Change 1980-1990	0.158**	0.055	1.171
Kids Change 1980-1990	-0.229	0.13	0.795
Travel Time to Work	0.068	0.061	1.07
Strategic Interaction	3.939**	1.091	51.36
Metropolitan Hierarchy	-0.082	0.285	0.921
Low Pop	-1.215	0.718	0.297
Medium Pop	-1.062*	0.51	0.346
Kids 1980	-0.096	0.068	0.908
Seniors 1980	0.007	0.061	1.007
LA Region	0.878	0.534	2.405
Central Valley Region	-1.301	1.272	0.272
Other Region	-0.881	0.79	0.414
Constant	4.632	3.321	102.8
N	422		
-2 Log Likihood Ratio	166.378		

*p<.05 **p<.01

Table 5.24: Model 3c: Zoning Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	7.77	87.11	2368.49
White 1980	0.038	0.028	1.039
Residential Stability	-0.030	0.049	0.971
Homeownership	-0.009	0.033	0.991
Low Income 1980	9.318	87.12	11137
Middle Income 1980	9.345	87.11	11445
Low Income by Suburb	-4.741	87.12	0.009
Middle Income by Suburb	-7.581	87.11	0.001
Pop Change 1980-1990	0.007	0.006	1.007
White Change 1980-1990	-0.012	0.048	0.988
Kids Change 1980-1990	-0.153	0.118	0.858
Travel Time to Work	0.148	0.085	1.160
Strategic Interaction	-2.212	1.855	0.109
Metropolitan Hierarchy	0.390	0.384	1.477
Low Pop	-2.851*	1.333	0.058
Medium Pop	-0.912	0.615	0.402
Kids 1980	-0.093	0.085	0.911
Seniors 1980	-0.039	0.074	0.961
LA Region	-0.766	0.746	0.465
Central Valley Region	-8.384	24.01	0.000
Other Region	-0.891	1.075	0.410
Constant	-13.265	87.22	0.000
N	422		
-2 Log Likihood Ratio	113.507		

*p<.05 **p<.01

Table 5.25: Model 3d: General Controls Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	6.171	19.68	478.6
White 1980	0.009	0.021	1.009
Residential Stability	-0.069	0.05	0.933
Homeownership	0.027	0.033	1.027
Low Income 1980	5.776	19.70	322.4
Middle Income 1980	7.199	19.68	1338.5
Low Income by Suburb	-4.763	19.72	0.009
Middle Income by Suburb	-7.271	19.69	0.001
Pop Change 1980-1990	-0.004	0.014	0.996
White Change 1980-1990	0.099	0.052	1.104
Kids Change 1980-1990	-0.172	0.138	0.842
Travel Time to Work	0.073	0.066	1.075
Strategic Interaction	-0.672	1.237	0.511
Metropolitan Hierarchy	-0.337	0.283	0.714
Low Pop	-2.902**	0.94	0.055
Medium Pop	-1.584**	0.55	0.205
Kids 1980	-0.11	0.072	0.896
Seniors 1980	-0.002	0.057	0.998
LA Region	-0.404	0.56	0.668
Central Valley Region	-1.14	1.334	0.320
Other Region	-0.223	0.801	0.800
Constant	-3.672	19.97	0.025
N	422		
-2 Log Likihood Ratio	164.185		

*p<.05 **p<.01

Table 5.26: Model 3e: Housing/Population Cap Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	0.808	1.510	2.244
White 1980	0.016	0.035	1.016
Residential Stability	-0.119	0.076	0.887
Homeownership	0.077	0.061	1.08
Low Income 1980	-6.629	23.10	0.001
Middle Income 1980	0.023	1.737	1.023
Low Income by Suburb	7.122	23.10	1238.5
Middle Income by Suburb	0.808	1.741	2.243
Pop Change 1980-1990	-0.01	0.016	0.99
White Change 1980-1990	0.186*	0.084	1.204
Kids Change 1980-1990	-0.118	0.206	0.888
Travel Time to Work	-0.092	0.109	0.912
Strategic Interaction	3.134	2.021	22.96
Metropolitan Hierarchy	-0.02	0.478	0.981
Low Pop	-1.38	1.194	0.251
Medium Pop	-0.598	0.786	0.55
Kids 1980	0.193	0.141	1.213
Seniors 1980	0.074	0.121	1.077
LA Region	-1.854	1.023	0.157
Central Valley Region	-0.286	1.586	0.751
Other Region	-0.589	1.177	0.555
Constant	-7.604	6.264	0.000
N	422		
-2 Log Likihood Ratio	76.299		

*p<.05 **p<.01

Table 5.27: Model 3f: Commercial/Industrial Caps Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	8.144	142.21	3442
White 1980	0.046	0.035	1.05
Residential Stability	0.148	0.083	1.16
Homeownership	-0.091	0.050	0.91
Low Income 1980	9.038	142.22	8418
Middle Income 1980	11.288	142.21	79845
Low Income by Suburb	-7.591	142.23	0.00
Middle Income by Suburb	-11.237	142.22	0.00
Pop Change 1980-1990	0.024*	0.010	1.02
White Change 1980-1990	0.021	0.080	1.02
Kids Change 1980-1990	-0.474	0.257	0.62
Travel Time to Work	0.222*	0.112	1.25
Strategic Interaction	-1.575	2.073	0.21
Metropolitan Hierarchy	-0.727	0.459	0.48
Low Pop	-10.043	28.15	0.00
Medium Pop	-1.120	0.768	0.33
Kids 1980	-0.174	0.120	0.84
Seniors 1980	-0.204	0.124	0.82
LA Region	-0.337	0.872	0.71
Central Valley Region	-5.805	37.14	0.00
Other Region	1.540	1.446	4.67
Constant	-13.930	142.321	0.00
N	422		
-2 Log Likihood Ratio	77.67		

*p<.05 **p<.01

Table 5.28: Model 3g: Infrastructure Adequacy Logistic Regression

	B	S.E.	Odds Ratio
Suburb = 1	3.472	566.32	32.19
White 1980	-0.103	0.073	0.902
Residential Stability	-0.557*	0.25	0.573
Homeownership	0.322*	0.163	1.379
Low Income 1980	-7.609	572.88	0.000
Middle Income 1980	9.523	566.31	13674
Low Income by Suburb	0.753	632.72	2.124
Middle Income by Suburb	-0.687	566.33	0.503
Pop Change 1980-1990	0.000	0.015	1.000
White Change 1980-1990	-0.022	0.112	0.978
Kids Change 1980-1990	-0.781	0.505	0.458
Travel Time to Work	0.44	0.256	1.552
Strategic Interaction	-4.272	4.01	0.014
Metropolitan Hierarchy	-0.558	0.745	0.572
Low Pop	-22.20	75.052	0.000
Medium Pop	-5.005*	2.163	0.007
Kids 1980	-1.014*	0.454	0.363
Seniors 1980	-0.283	0.228	0.754
LA Region	-0.413	2.087	0.662
Central Valley Region	-17.37	110.786	0.000
Other Region	3.291	2.175	26.87
Constant	20.694	566.53	971067504.5
N	422		
-2 Log Likihood Ratio	30.319		

*p<.05 **p<.01

Table 5.29: Descriptive Statistics OLS Regression (n=422)

	Min.	Max.	Mean	S.E. of Mean	Skewness	Kurtosis
Propose 1986-1998	0	1	0.23	0.02	1.32	-0.26
Adopt 1986-1998	0	1	0.17	0.02	1.74	1.02
Housing Units 00	26	1337706	21634	3611	14.23	240.32
Single-Family 00	18	588581	12546	1682	12.47	192.79
Multi-Family 00	5	741663	8583	1956	15.38	270.01
Rental 00 (%)	2.80	80.80	38.03	0.64	-0.10	0.66
Black 00 (%)	0	46.42	3.82	0.29	3.30	14.46
Hispanic 00 (%)	2.15	98.27	31.63	1.24	0.97	-0.03
White 00 (%)	1.02	95.01	52.49	1.26	-0.31	-1.03
Median Income 00	20133	200001	51556	1348	2.56	8.97
Housing Units 90	52	1299963	19889	3475	14.58	250.19
Single-Family 90	18	562853	11073	1585	13.02	207.08
Multi-Family 90	5	716233	8136	1887	15.53	274.47
Rental 00 (%)	2.10	84.60	39.04	0.64	-0.23	1.01
Black 90 (%)	0	54.83	3.91	0.32	4.05	22.12
Hispanic 90 (%)	1.66	97.09	25.84	1.13	1.36	0.99
White 90 (%)	1.46	97.07	62.64	1.20	-0.77	-0.38
Median Income 90	14964	150001	37404	937	2.53	8.90
Density 90	31	23208	3986	153.86	2.11	6.71
Yr. Incorporation	1850	1979	1919	1.64	-0.05	-0.92
Suburb	0	1.00	0.47	0.02	0.11	-2.00
Res. Stability	11.35	72.18	45.60	0.45	-0.02	0.23
Homeownership	10.20	97.80	58.37	0.68	0.25	1.04
Vacant 90	0.40	11.61	3.36	0.09	1.40	2.79
Travel	6.25	40.53	22.51	0.26	0.01	0.00
Emp. Ch 1980-90 (%)	-0.27	4.80	0.41	0.02	3.63	21.49
L.A. Region	0	1	0.35	0.02	0.62	-1.63
Central Valley	0	1	0.20	0.02	1.48	0.18
Other Region	0	1	0.22	0.02	1.34	-0.21

Table 5.30: Transformed Descriptive Statistics OLS Regression (n=422)

	Min.	Max.	Mean	S.E. of Mean	Skewness	Kurtosis
Propose 1986-1998	0	1	0.225	0.02	1.321	-0.256
Adopt 1986-1998	0	1	0.173	0.018	1.735	1.016
Housing Units 00 (LN)	3.3	14.1	8.958	0.07	-0.361	0.793
Single-Family 00 (LN)	2.9	13.3	8.528	0.068	-0.428	0.792
Multi-Family 00 (LN)	1.6	13.5	7.618	0.085	-0.415	0.546
Rental 00 (%)	2.8	80.8	38.025	0.636	-0.097	0.659
Black 00 (LN)	-3.5	3.8	0.49	0.066	0.063	-0.522
Hispanic 00 (%)	0.8	4.6	3.076	0.046	-0.394	-0.675
White 00 (%)	1.02	95.01	52.4935	1.2597	-0.312	-1.031
Median Income 00 (LN)	9.9	12.2	10.748	0.021	0.782	0.813
Housing Units 90 (LN)	4	14.1	8.84	0.071	-0.259	0.468
Single-Family 90 (LN)	2.9	13.2	8.372	0.069	-0.346	0.606
Multi-Family 90 (LN)	1.6	13.5	7.523	0.087	-0.362	0.358
Rental 00 (%)	2.1	84.6	39.038	0.641	-0.233	1.013
Black 90 (LN)	-4	4	0.49	0.067	-0.025	-0.129
Hispanic 90 (%)	1.66	97.09	25.84	1.13	1.36	0.99
White 90 (%)	1.46	97.07	62.643	1.2001	-0.772	-0.383
Median Income 90 (LN)	9.6	11.9	10.434	0.02	0.754	0.884
Density 90 (LN)	3.4	10.1	7.985	0.043	-1.319	4.541
Yr. Incorporation	1850	1979	1918.85	1.64	-0.054	-0.922
Suburb	0	1	0.474	0.024	0.105	-1.999
Res. Stability	11.35	72.18	45.6046	0.4526	-0.016	0.233
Homeownership	10.2	97.8	58.3707	0.6779	0.248	1.035
Vacant 90 (LN)	-0.9	2.5	1.083	0.025	-0.344	0.653
Travel	6.25	40.53	22.5139	0.2573	0.01	-0.004
Emp. Ch 1980-90 (%)	-0.27	4.8	0.4056	0.024	3.629	21.493
L.A. Region	0	1	0.353	0.023	0.617	-1.627
Central Valley	0	1	0.204	0.02	1.476	0.179
Other Region	0	1	0.223	0.02	1.337	-0.212

Table 5.31: Ordinary Least Squares Predicting Housing Outcomes
Independent Variable: Propose 1986-1998

	Model 4a: Housing Units 00 (LN)			Model 4b: Single-Family Units 00 (LN)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Propose 1986-1998 = 1	0.038*	0.02	0.02	0.033	0.02	0.06
Controls Variables:						
Housing Units 90 (LN)	1.003**	0.01	0.00			
Single-Family 90 (LN)				0.997**	0.01	0.00
Multi-Family 90 (LN)						
Rental 90 (%)						
Density 90 (LN)	0.005	0.01	0.62	-0.005	0.01	0.67
Yr. Incorporation	0.000	0.00	0.05	0.000	0.00	0.29
Suburb = 1	0.047*	0.02	0.01	0.047*	0.02	0.03
Median Income 90 (LN)	-0.044	0.03	0.09	-0.026	0.03	0.40
Res. Stability	-0.000	0.00	0.90	-0.000	0.00	0.73
Homeownership	0.002**	0.00	0.00	0.001	0.00	0.12
Vacant (%)	0.005	0.00	0.18	0.012**	0.00	0.01
Travel	-0.000	0.00	0.90	0.000	0.00	0.99
Emp. Ch 1980-90 (%)	0.116**	0.02	0.00	0.174**	0.02	0.00
L.A. Region	-0.039*	0.02	0.02	-0.036	0.02	0.07
Central Valley	0.058*	0.03	0.02	0.053	0.03	0.07
Other Region	-0.001	0.02	0.97	-0.012	0.03	0.46
(Constant)	-0.458	0.49	0.35	-0.186	0.57	0.74
n	421			418		
Adjusted R^2	0.993			0.991		
F (overall model)	4537.58			3150.33		
df	14			14		
p	< .000			< .000		

Table 5.31 Cont.: Ordinary Least Squares Regression Predicting Housing Outcomes
Independent Variable: Propose 1986-1998

	Model 4c: Multi-Family Units 00 (LN)			Model 4d: Rental 00 (%)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Propose 1986-1998 = 1	0.037	0.03	0.20	-0.180	0.45	0.69
Controls Variables:						
Housing Units 90 (LN)						
Single-Family 90 (LN)						
Multi-Family 90 (LN)	0.995**	0.01	0.00			
% Renter-Occupied 90				0.865**	0.11	0.00
Density 90 (LN)	0.031	0.02	0.09	0.615*	0.25	0.01
Yr. Incorporation	0.001	0.00	0.06	-0.019**	0.01	0.00
Suburb = 1	0.044	0.04	0.22	-1.080	0.57	0.06
Median Income 90 (LN)	-0.028	0.05	0.58	-1.438	0.78	0.07
Res. Stability	-0.001	0.00	0.82	-0.017	0.03	0.57
Homeownership	0.003*	0.00	0.02	-0.033	0.10	0.75
Vacant (%)	-0.014	0.01	0.07	0.184	0.14	0.20
Travel	-0.008**	0.00	0.02	0.038	0.05	0.50
Emp. Ch 1980-90 (%)	0.056	0.03	0.07	-1.909**	0.49	0.00
L.A. Region	-0.018	0.03	0.59	1.186*	0.52	0.02
Central Valley	0.033	0.05	0.49	-0.648	0.75	0.39
Other Region	0.012	0.04	0.80	0.78	0.69	0.26
(Constant)	-1.260	0.95	0.18	53.348**	19.12	0.01
n	418			421		
Adjusted R^2	0.984			0.925		
F (overall model)	1782.55			373.94		
df	14			14		
p	< .000			< .000		

Table 5.32: Ordinary Least Squares Predicting Housing Outcomes
Independent Variable: Adopt 1986-1998

	Model 5a: Housing Units 00 (LN)			Model 5b: Single-Family Units 00 (LN)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Adopt 1986-1998 = 1	0.020	0.02	0.23	0.012	0.02	0.53
Controls Variables:						
Housing Units 90 (LN)	1.004**	0.01	0.00			
Single-Family 90 (LN)				0.998**	0.01	0.00
Multi-Family 90 (LN)						
Rental 90 (%)						
Density 90 (LN)	0.005	0.01	0.62	-0.005	0.01	0.67
Yr. Incorporation	0.0003	0.00	0.06	0.0003	0.00	0.29
Suburb = 1	0.048*	0.02	0.010	0.048*	0.02	0.03
Median Income 90 (LN)	-0.039*	0.03	0.14	-0.020	0.03	0.51
Res. Stability	-0.0002	0.00	0.83	-0.0005	0.00	0.66
Homeownership	0.002**	0.00	0.00	0.001	0.00	0.14
Vacant 90 (LN)	0.006	0.00	0.15	0.012**	0.00	0.01
Travel	-0.000	0.00	0.99	0.0002	0.00	0.92
Emp. Ch 1980-90 (%)	0.115**	0.02	0.00	0.173**	0.02	0.00
L.A. Region	-0.043*	0.02	0.01	-0.040*	0.02	0.05
Central Valley	0.056*	0.03	0.02	0.050	0.03	0.08
Other Region	-0.002	0.02	0.92	-0.021	0.03	0.43
(Constant)	-0.509	0.49	0.30	-0.245	0.57	0.67
n	422			418		
Adjusted R^2	0.993			0.991		
F (overall model)	4490.16			3125.83		
df	14			14		
p	< .000			< .000		

Table 5.32 Cont.: Ordinary Least Squares Predicting Housing Outcomes
Independent Variable: Adopt 1986-1998

	Model 5c: Multi-Family Units 00 (LN)			Model 5d: Rental 00 (%)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Adopt 1986-1998 = 1	0.036	0.03	0.25	-0.018	0.49	0.97
Controls Variables:						
Housing Units 90 (LN)						
Single-Family 90 (LN)						
Multi-Family 90 (LN)	0.995**	0.01	0.00			
% Renter-Occupied 90				0.862**	0.11	0.00
Density 90 (LN)	0.031	0.02	0.09	0.608*	0.25	0.01
Yr. Incorporation	0.0007	0.00	0.07	-0.019**	0.01	0.00
Suburb = 1	0.045	0.04	0.21	-1.090	0.57	0.06
Median Income 90 (LN)	-0.025	0.05	0.62	-1.486	0.78	0.06
Res. Stability	-0.0005	0.00	0.82	-0.016	0.03	0.61
Homeownership	0.003*	0.00	0.02	-0.035	0.10	0.74
Vacant 90 (LN)	-0.014	0.01	0.08	0.179	0.14	0.21
Travel	-0.007*	0.00	0.02	0.035	0.05	0.51
Emp. Ch 1980-90 (%)	0.056	0.03	0.07	-1.902**	0.49	0.00
L.A. Region	-0.019	0.03	0.56	1.212*	0.52	0.02
Central Valley	0.034	0.05	0.47	-0.619	0.76	0.41
Other Region	0.011	0.04	0.80	0.800	0.69	0.25
(Constant)	-1.277	0.95	0.18	54.002	19.11	0.01
n	418			422		
Adjusted R^2	0.984			0.925		
F (overall model)	1781.19			373.79		
df	14			14		
p	< .000			< .000		

Table 5.33: Ordinary Least Squares Predicting Socioeconomic Outcomes
Independent Variable: Propose 1986-1998

	Model 6a: Black 00 (LN)			Model 6b: Hispanic 00 (%)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Propose 1986-1998 = 1	0.056	0.07	0.44	-1.239*	0.63	0.049
Controls Variables:						
Black 90 (LN)	0.846**	0.03	0.00			
Hispanic 90 (%)				1.028**	0.02	0.00
White 90 (%)						
Median Income 90 (LN)	-0.137	0.13	0.30	-3.731**	1.15	0.00
Density 90 (LN)	-0.009	0.04	0.84	0.666	0.34	0.05
Yr. Incorporation	-0.001	0.00	0.45	-0.005	0.01	0.54
Suburb = 1	-0.008	0.09	0.94	0.652	0.80	0.42
Res. Stability	-0.008	0.01	0.15	-0.166**	0.05	0.00
Homeownership	0.009*	0.00	0.01	0.052	0.03	0.11
Vacant 90 (LN)	0.270**	0.07	0.00	0.376*	0.17	0.03
Travel	0.009	0.01	0.31	0.051	0.07	0.48
Emp. Ch 1980-90 (%)	-0.080	0.08	0.33	-0.241	0.73	0.74
L.A. Region	0.039	0.08	0.64	1.709	0.75	0.02
Central Valley	0.156	0.12	0.20	2.033	1.06	0.06
Other Region	-0.100	0.11	0.40	-1.829	0.97	0.06
(Constant)	2.353	2.44	0.34	51.113	20.63	0.01
n	411			422		
Adjusted R^2	.817			0.961		
F (overall model)	131.80			742.46		
df	14			14		
p	< .000			< .000		

Table 5.33 Cont.: Ordinary Least Squares Predicting Socioeconomic Outcomes
Independent Variable: Propose 1986-1998

	Model 6c: White 00 (%)			Model 6d: Median Income 00 (LN)		
	B	S.E.	P-Value	B	S.E.	P-Value
Independent Variable:						
Propose 1986-1998 = 1	1.493*	0.70	0.03	0.022	0.01	0.07
Controls Variables:						
Black 90 (LN)						
% Hispanic 90						
% White 90	1.000*	0.02	0.00			
Median Income 90 (LN)	2.152	1.26	0.09	1.009**	0.02	0.00
Density 90 (LN)	-1.479	0.39	0.00	-0.033**	0.01	0.00
Yr. Incorporation	-0.001**	0.009	0.91	0.000	0.00	0.60
Suburb = 1	0.966	0.88	0.27	-0.017	0.02	0.28
Res. Stability	0.234*	0.049	0.00	0.002**	0.00	0.009
Homeownership	-0.106*	0.04	0.00	-0.002**	0.00	0.00
Vacant 90 (LN)	-0.421	0.18	0.02	-0.028**	0.01	0.009
Travel	0.006	0.08	0.94	-0.002	0.00	0.19
Emp. Ch 1980-90 (%)	0.486	0.79	0.54	0.048**	0.01	0.00
L.A. Region	-0.619	0.81	0.45	-0.155**	0.01	0.00
Central Valley	-0.502	1.16	0.67	-0.082**	0.02	0.00
Other Region	3.801	1.07	0.00	-0.081**	0.02	0.00
(Constant)	-23.906	22.78	0.30	0.497	0.40	0.22
n	422			422		
Adjusted R^2	0.954			.948		
F (overall model)	630.13			591.80		
df	14			14		
p	< .000			< .000		

Table 5.34: Ordinary Least Squares Predicting Socioeconomic Outcomes
Independent Variable: Adopt 1986-1998

	Model 7a: Black 00 (LN)			Model 7b: Hispanic 00 (%)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Adopt 1986-1998 = 1	0.049	0.08	0.53	-0.497	0.69	0.47
Controls Variables:						
Black 90 (LN)	0.845**	0.03	0.00			
Hispanic 90 (%)				1.029**	0.02	0.00
White 90 (%)						
Median Income 90 (LN)	-0.13	0.13	0.32	-3.954**	1.15	0.00
Density 90 (LN)	-0.008	0.04	0.85	0.624	0.34	0.07
Yr. Incorporation	-0.001	0.00	0.43	-0.005	0.01	0.56
Suburb = 1	-0.006	0.09	0.95	0.598	0.80	0.46
Res. Stability	-0.008	0.01	0.14	-0.160**	0.05	0.00
Homeownership	0.009*	0.00	0.01	0.055	0.03	0.10
Vacant 90 (LN)	0.273**	0.07	0.00	0.362*	0.17	0.03
Travel	0.009	0.01	0.30	0.043	0.07	0.55
Emp. Ch 1980-90 (%)	-0.080	0.08	0.33	-0.231	0.73	0.75
L.A. Region	0.036	0.08	0.66	1.826*	0.75	0.02
Central Valley	0.157	0.12	0.20	2.136*	1.06	0.045
Other Region	-0.097	0.11	0.39	-1.735	0.98	0.08
(Constant)	2.319	2.44	0.34	52.867	20.71	0.01
n	411			422		
Adjusted R^2	0.817			0.961		
F (overall model)	131.72			736.21		
df	14			14		
p	< .000			< .000		

Table 5.34 Cont.:Ordinary Least Squares Predicting Socioeconomic Outcomes
Independent Variable: Adopt 1986-1998

	Model 7c: White 00 (%)			Model 7d: Median Income 00 (LN)		
	B	**S.E.**	**P-Value**	**B**	**S.E.**	**P-Value**
Independent Variable:						
Adopt 1986-1998 = 1	1.310	0.76	0.09	0.016	0.01	0.24
Controls Variables:						
Black 90 (LN)						
% Hispanic 90						
% White 90	1.001**	0.02	0.00			
Median Income 90 (LN)	2.300	1.25	0.07	1.012**	0.02	0.00
Density 90 (LN)	-1.457**	0.39	0.00	-0.032**	0.01	0.00
Yr. Incorporation	-0.002**	0.009	0.87	0.000	0.00	0.63
Suburb = 1	1.005	0.88	0.26	-0.016	0.02	0.30
Res. Stability	0.232*	0.049	0.00	0.002*	0.00	0.01
Homeownership	-0.107*	0.04	0.00	-0.002**	0.00	0.00
Vacant 90 (LN)	-0.409	0.18	0.03	-0.027*	0.01	0.01
Travel	0.013	0.08	0.87	-0.002	0.00	0.21
Emp. Ch 1980-90 (%)	0.490	0.79	0.54	0.048**	0.01	0.00
L.A. Region	-0.687	0.81	0.40	-0.157**	0.01	0.00
Central Valley	-0.493	1.17	0.67	-0.083**	0.02	0.00
Other Region	3.756	1.08	0.00	-0.082**	0.02	0.00
(Constant)	-24.738	22.82	0.28	0.479	0.40	0.23
n	422			422		
Adjusted R^2	0.954			0.948		
F (overall model)	627.56			588.98		
df	14			13		
p	< .000			< .000		

VI. DISCUSSION OF THE RESULTS

The results from the statistical analyses presented in the last chapter provide a picture of growth management that is more complicated than previously understood. In many instances, the findings were contrary to what the existing theories predict. This suggests that there is a need for better theory development in the area of growth management. The findings from this study build on existing knowledge, while at the same time raise more questions about why cities enact growth management policies and what effects these policies have on housing and socioeconomic outcomes. The following discussion will highlight some of the major theoretical implications of this study and suggestions for future work.

A. Explaining the Proposal and Adoption of Anti-Growth Policies: A Test of Four Hypotheses

The first analysis in this study examines what predictors influence citizens to use 'voice' (as exhibited through the ballot box) as a form of participation in the local decision-making process on growth. There are four prominent explanations for why citizens mobilize and enact local anti-growth policies. The first explanation contends that there is a social status bias in rates of political participation and support for anti-growth policies. Therefore, it is predicted that elite communities, defined as communities with higher socioeconomic standing, are more likely to mobilize and vote for anti-growth ballot measures. The results from this study lend little support for the hypothesis that

growth management is a tool used by elite communities. It appears that the notion that higher status communities will be more likely to propose and adopt anti-growth measures is perhaps too simple an explanation. The only two variables that were significant predictors of the proposal of anti-growth measures was suburb and low-income by suburb. While suburbs were less likely to propose anti-growth measures, low-income suburbs were more likely. There may be a few reasons for these unexpected results. First, higher-income suburbs, by the nature of being more expensive to live in, may already be able to keep out undesirable growth. Thus, it may be the low-income suburbs need a mechanism to manage growth. Second, low-income suburbs, as opposed to high-income suburbs may be experiencing a disproportionate share of growth in multi-family or rental housing, which these places may deem as undesirable. Finally, suburbs in general do not qualify anti-growth ballot measures because they have other mechanisms to manage growth. It may be that local government officials in suburbs are more responsive to their suburban constituents and, therefore, these places do not need to manage growth at the ballot box.

Low-income suburbs are not only more likely than higher-income suburbs to propose anti-growth measures, but also to adopt these measures. In addition, greater levels of residential stability reduce the likelihood that cities enact anti-growth policies. Again, these findings do not support the community status hypothesis as found in both the political participation and growth management literatures. The results testing the community status hypotheses may be better understood when placed in a local political economic context. To elaborate, it may be the case that low-income suburbs are less able to pay the costs of growth and enact anti-growth measures because of the economic or

fiscal needs of the jurisdiction. In addition, unlike more urbanized areas, the residents in these suburbs have traditionally been more capable of navigating the political process in order to 'voice' their concerns and adopt policies that suit their interests. Although this study did not explore local political economic contexts in-depth, these findings suggest that this may be an important area of study for future studies of citizen support for growth management.

The second explanation for support of anti-growth policies is developed from the expressed concerns of local residents. DeGrove (1995) explains that the development of elaborate growth management plans was a response to the rising costs of rapid growth and grassroots movements to curb sprawl and environmental degradation. The wave of support for growth management that emerged in the early 1970's was a response to the consequences of rapid growth, which include: traffic congestion, longer commutes, air and environmental degradation, loss of open space, overcrowded schools, and over inflated housing prices and rents. These consequences were degrading the "use" and "exchange" values of their property and neighborhoods (Logan and Molotch, 1987). While the city treasury might have been profiting from growth, the benefits were not directly trickling down to residents (Schneider, 1992). The growth pressures hypothesis states that jurisdictions experiencing the greatest growth pressures will qualify and enact growth restricting policies.

A test of the growth pressures hypothesis finds no support. There is no evidence that local population growth or greater average travel times to work influences the proposal or adoption of anti-growth measures. The variables in these models that increase the likelihood of anti-growth proposal and adoption are opposite of what is

predicted. Greater increases in white population and larger decreases in children population increase the odds that cities propose and adopt anti-growth policies. It was originally believed that cities losing whites (or gaining in non-whites) would be more likely to adopt growth controls in response to a loss in homogeneity and changing racial character. Also, greater growth in children population was believed to be a proxy for school overcrowding and, therefore, induce more support for growth management measures. These findings suggest that the role of race and life-cycle (i.e. families in the stage where children live at home) may be more complicated than expected. There are also several other explanations for these findings. First, as found in other studies, it may be perceived growth, not actual rates of growth that influence citizens' support growth of management (Baldassare, 1985; Baldassare and Wilson, 1996). Second, regional growth, rather than local growth may be a more important predictor of local growth management politics and policy adoption (Levine et al., 1996). Third, growth management enacted at the ballot box may be influenced by the prediction of future growth, not past rates of growth. Citizens may be fearful of what they expect to happen in their jurisdiction, not what has happened. Finally, anti-growth measures may be a reaction to fiscal pressures, not just rates of population growth or travel time. This study did not include fiscal variables, but future work should investigate this further.

The third explanation for local involvement in growth management ballot box activity involves what Brueckner (1995) calls, strategic interaction. The rationale for the strategic interaction model is based on economic principles. Brueckner explains that city governments attempt to maximize their total social welfare. Growth restrictions work to maximize total social welfare because the benefits outweigh the costs. A main

component of the strategic interaction model is that local governments are competing with one another to maximize their total social welfare. In this competitive environment, cities adopt growth controlling policies when they notice that their neighbors are doing so. Thus, the adoption of anti-growth measures is a reaction to regional growth management activity.

This is the only hypothesis of the four that is strongly supported. The results show that cities that are located in regions that have qualified more anti-growth ballot measures are more likely to propose and adopt their own anti-growth policies. The significant findings for the strategic interaction variable and the null findings for the variables that measure local growth pressures, suggests that local responses to growth may reflect a concern for rates of growth in the region, rather than at the local level. These findings are somewhat disconcerting. If the problems of growth are at the regional level, but the actions to control growth are at the local level, is there a disconnect between the problem and the solution? Is growth management too fragmented and decentralized to develop good growth planning? These questions tap into the questions about regional government and their role in planning.

The final explanation given for support for growth management argues that a jurisdiction's status relative to other jurisdictions in the metropolitan area plays a role in growth management policy adoption. Logan's (1978) metropolitan hierarchy model predicts that cities at the top of the metropolitan hierarchy are more capable and more willing to exercise their economic and political will to maintain or improve their social standing. The metropolitan hierarchy variable is insignificant in both models predicting the proposal and adoption of anti-growth measures. This suggests that high status cities

are no more likely than lower status cities to propose and adopt ballot measures. It is possible that the metropolitan hierarchy is more suited for decisions made by local governments rather than citizens. Local government officials and administrators in high status cities may enact growth restricting policies in order to maintain or improve their economic standing within the metropolitan region, but it appears that citizens in high-status cities are not more likely to do so. Future work may want to compare growth management policies enacted by citizens and by local officials to see if the motivations are different between these groups of actors.

B. What Predicts Anti-Growth Tool Adoption?

The second statistical analysis presented in Chapter V tests Van Liere and Dunlap's (1981) question, "Does it make a difference how it's measured?" This analysis examines seven different types of growth management tools and attempts to determine which of the four hypotheses, as mentioned above, better explains the adoption of these tools. It is predicted that it does indeed matter how growth management is measured. That is, citizen support for growth management should depend on the tool that is on the ballots. The findings in this analysis are consistent with these predictions. For example, the strategic interaction variable was positively related to the adoption of UGB and Vote Requirement models, population size was the only significant variable in the Zoning and General Controls models, and growth in white population is positively related to the adoption of housing/population caps. Although this analysis provided some interesting findings, small variations in the dependent variables in some of the models are a

limitation of the robustness of the findings. There has been very little work in the area of understanding the differences in support across various growth management strategies; the findings here are a start. Future work should recognize the differential effects that may be a result of growth management conceptualization and measurement.

C. Citizen Enacted Anti-Growth Policies: Real Outcomes or Symbolic Politics?

The final statistical analysis contained in the last chapter involves understanding the effects of growth management on housing growth and socioeconomic composition. Economic theory posits that the main effect that growth management has on housing is to restrict developable land and consequently, the supply of housing. This of course depends on the elasticity of supply of land. If supply of land is elastic, then there should not be a decrease in the rate of housing growth. On the other hand, if supply is inelastic, then housing supply should decrease. The results for this analysis reveal that cities that proposed anti-growth measures had greater increases in housing unit growth, but the adoption of anti-growth policies was not significantly related to housing unit growth. It appears that cities experiencing more housing growth are motivated to qualify growth management ballot measures, but they may not be able to adopt them. Hence, these cities actually have higher rates of housing growth. While the ballot box may be a means for citizens to 'voice' their concerns, citizens may not have the power to stop the 'growth machine' (Molotch, 1976). These findings contradict Staley's (1998) study of zoning referenda in Ohio cities. Staley finds that the proposal (but not the adoption) of zoning referenda is significantly related to a reduction in housing construction. Using a

transactions costs framework, he explains that ballot measures that attempt to limit growth cause uncertainty in the development process, thereby slowing down or stopping development. The results from this analysis are more consistent with Warner and Molotch's (1995) 'power to build' argument. They contend that it is unlikely that citizen groups have enough power to overcome the powerful growth interests in American cities. They suggest that some growth controls may be a form of 'symbolic politics' that is a way for citizens to vent their frustrations without having any real consequences. An interesting question that arises from this analysis is whether there is a difference in outcomes between growth management initiatives and referenda that are sponsored by citizens, compared to those sponsored by local officials. Measures sponsored by local officials may be better enforced once they are adopted than those sponsored by citizens.

To test Pendall's (2000) 'chain of exclusion' hypothesis, the effects of growth management on shifting housing and socioeconomic outcomes is analyzed. Pendall hypothesizes that there is an indirect effect of growth control policy enactment on the exclusion of minority population through shifting housing away from multi-family, affordable, and rental units to single-family units. The OLS regression analysis shows that the proposal of growth management has no significant effect in shifting housing, but it does have a significant effect negative effect on the size of Hispanic population. In addition, growth management is positively related to White population growth. Strangely, the adoption of growth management does not significantly affect housing or socioeconomic outcomes. These results suggest that places that are politically active in trying to slow growth, regardless of whether they are successful, are the types of places

that are attractive to Whites and unattractive to Hispanics. Pendall might suggest that these places have exclusionary tendencies.

VII. CONCLUSIONS AND POLICY IMPLICATIONS

The main purpose of this dissertation is to better understand the role of citizen participation in growth politics and policy-making via the ballot box. The anti-growth movement has been predominantly spearheaded by citizens who hail the virtues of sprawl elimination, combating environmental degradation, and preserving community character in local jurisdictions across America. These citizens express concerns about negative externalities from rapid growth that are changing the face and pace of their communities. Academic scholars, as opposed to citizens, have framed the growth management movement as an issue of inequality. They contend that growth management is supported by citizens in the upper echelon of society and the benefits from restricting growth (e.g. higher property values) disproportionately advantage this same group. Other scholars have argued that growth management policies are motivated by regional economic competition between local jurisdictions.

Using a database of growth management initiatives on the ballots of 159 California cities between 1986-2000, and city level demographic and housing data from the 1980, 1990, and 2000 Censuses, this study investigated four explanations concerning the likelihood of the proposal and adoption of growth management initiatives. This research was designed to examine the motivations behind citizen enacted anti-growth policies. In addition, this study examined the outcomes of growth management initiatives on housing and socioeconomic change.

The results from the logistic regression analyses revealed that there is very little evidence that anti-growth policies are motivated by elitist values or tendencies as tested

in both the community status and metropolitan hierarchy regression analyses. These explanations may have been more accurate in the early years of growth management policy adoption, but the pervasiveness of growth management adoption today and the insignificant findings for the status related hypotheses suggests that growth management is perhaps found in all types of communities, not just advantaged ones. The logistic regression analysis also provided no support for the growth pressures hypothesis, thus indicating that past levels of local growth do not motivate citizens to support growth management. The only hypothesis that garnered support across all models predicting the proposal and adoption of anti-growth ballot measures is strategic interaction. The significance of the strategic interaction variable supports the notion that local policies are influenced by growth management activity at the regional level. Thus, citizens may be keenly aware of growth politics in other local jurisdictions in their region. They may also be afraid that if they do not implement growth restricting policies, they will receive unwanted spillover growth that other cities in the region have excluded.

If citizens support growth management policies as a reaction to growth management activity at the regional level and not real rates of local growth or any negative consequences of growth, how does this affect growth planning and outcomes? It appears that citizens are using the ballot box as a protective mechanism to keep out expected local growth, which is signaled by greater growth management activity at the regional level. In other words, they may be merely competing in a regional environment to keep up with their neighbors in other jurisdictions that have adopted growth management strategies. If this is true, allowing citizens the power to enact growth policies may create a more fragmented growth planning environment and unnecessary

growth policies. State policy-makers should reconsider whether or not the ballot box is an appropriate tool to make land-use and growth decisions. Perhaps providing a forum for dialogue exchange between citizens, planning experts, local officials, and administrators to participate in the growth planning and policy-making process may be a more cost-efficient, less controversial, and more productive way to make manage growth. One way to achieve this is through a community visioning process, in which the stakeholders within the community determine their core values, community vision, key benchmarks and strategies that define the community's future. The community visioning process provides opportunities for broad public participation, while also demanding accountability through annual progress reports. This process will enable residents to feel that their 'voice' truly matters, which may reduce the desire to resort to the ballot box to voice their growth concerns.

These results, which indicate that local jurisdictions react to regional growth pressures, also suggest that there is a need for more regional cooperation in growth planning. Currently, there is very little fiscal incentive for local jurisdictions in California to look beyond the needs of their locality and adopt strategies that benefit the region. Thus, if the problems that result from growth persists at the regional level and growth planning occurs at the local level, then there will continue to be a disconnect between the problem and the solution. This leaves little hope that local growth management strategies will accomplish anything fruitful beyond the boundaries of the local jurisdiction.

The logistic regression analyses also included an exploratory study that attempted to determine if the explanations for citizen support varied by different growth

management tools. The results from these analyses show that there are distinctly different reasons why certain tools are adopted by citizens. For example, strategic interaction is the strongest predictor of the adoption of both UGBs and Vote Requirements and greater growth in White population is a significant predictor of housing/population caps. Thus, while some growth management policies may be motivated by economic competition between local jurisdictions, others may be enacted because a certain group (e.g. whites) may be able to mobilize due to their shared values or similarities. Due to the low numbers of adoption of specific tools, further research is necessary to determine two factors: 1) why some tools are adopted more often than others and 2) the motivations for adopting specific tools. Understanding the motivations behind the adoption of certain tools will provide better insights into whether there are elitist or exclusionary tendencies that may be involved in growth management politics and policy adoption. The key finding from this analysis is that academics and policy-makers should be clear about the specific type of growth management strategy in question and their differential effects. Stated simply, not all growth management is the same, nor should the approaches be treated as the same. However, additional work aimed at understanding the preferences for specific tools versus others is needed to inform policy makers.

The final set of multivariate analyses investigated the extent to which growth management measures qualified and enacted at the ballot box influence housing and socioeconomic change. This section of the dissertation taps into questions of citizen power in effectively redirecting or slowing down growth. Much of the literature argues that citizens are the least powerful group among the major players (e.g. local officials and business groups) in the area of urban development. The direct democracy process

provides citizens a greater opportunity to participate and to bypass local officials in adopting policies that suit their needs and preferences. The findings from the OLS analyses reveal that citizen initiatives and referenda relating to growth management have no influence in slowing down housing growth. Rather, jurisdictions that propose anti-growth ballot measures are more likely to have higher rates of housing growth. Surprisingly, there was no significant relationship between the adoption of anti-growth measures and housing change. It appears that the direct democracy process is a mechanism that allows citizens to 'voice,' but proposing or adopting anti-growth ballot measures does not guarantee that growth will slowing down. These findings beg the question: Is the direct democracy process, when used to management growth, merely symbolic politics and is it an ineffective tool?

These findings raise concerns about the effectiveness of policies adopted at the ballot box. If they do not have the intended consequences, what is the utility of this process? Moreover, are citizens powerless in the face of growth and development as the 'growth machine' hypothesis posits? In order to answer these questions, future research should investigate the reason why anti-growth policies adopted at the ballot box do not work as intended. First, there may already be pro-development policies in place that counteract the anti-growth policies adopted at the ballot box. Second, policies adopted by citizens may be poorly implemented, thereby making them ineffective. Third, the enforcement of these policies may be weak, thereby allowing developers or local officials to carry out development. Considering the vast amount of money, time, and effort taken to mobilize citizen support for these measures that appear to be ineffective points to a

need to better understand the implementation process of growth management measures that have been adopted.

The most striking finding from the OLS analyses is that although anti-growth policies do not slow down housing growth or shift housing from multi-family to single-family, they have an effect on the racial composition of jurisdictions. Cities that qualify anti-growth measures have higher rates of growth in white population and lower rates of growth in Hispanic population. Although there was no evidence to show that community status is a significant predictor of whether cities will propose or adopt anti-growth measures, there appears to be some indication that there may be exclusionary consequences to Hispanics. This suggests that while there is no elite bias in utilizing the ballot box to manage growth, the outcomes due to the proposal of anti-growth measures may disproportionately exclude some groups. If certain groups are disproportionately disadvantaged or excluded due to the direct democracy process, policy-makers should re-evaluate the deleterious consequences that result from this process. Furthermore, if Hispanics are disproportionately excluded from cities with growth management, perhaps the Hispanic community should be educated about these consequences and encouraged to increase their levels of political participation in growth related issues.

Overall, the findings from this dissertation provide weak support for most of the hypotheses, the only exception is the effect of strategic interaction. This suggests that local growth management that is decided upon by citizens via the ballot box may be a different phenomenon than growth management adopted by other mechanisms. This study examines a variety of topics that are both timely and relevant to planning and policy, such as the ability of citizens to mobilize, the power of citizens to shape growth

outcomes, the utility of the direct democracy process to manage growth, and the relationship between growth management and equity. These topics are important topics of study for any student of urban growth and spatial differentiation who desires to understand how growth politics shape the form of the American city.

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APPENDIX

Appendix A: Anova

	Sum of Squares		df	Mean Square	F	P-Value
Suburb = 1	Between Groups	2.66	2	1.331	5.44	0.01
	Within Groups	102.83	420	0.245		
	Total	105.49	422			
White 1980	Between Groups	4280.20	2	2140.101	4.52	0.01
	Within Groups	198488.62	419	473.72		
	Total	202768.82	421			
Residential Stability	Between Groups	536.75	2	268.374	3.14	0.04
	Within Groups	35893.34	420	85.46		
	Total	36430.09	422			
Homeownership	Between Groups	438.39	2	219.193	1.13	0.32
	Within Groups	81326.80	419	194.097		
	Total	81765.18	421			
Low Income 1980	Between Groups	3.40	2	1.698	7.86	0.00
	Within Groups	90.49	419	0.216		
	Total	93.89	421			
Middle Income 1980	Between Groups	0.27	2	0.136	0.61	0.54
	Within Groups	93.62	419	0.223		
	Total	93.89	421			
High Income 1980	Between Groups	1.79	2	0.896	4.09	0.02
	Within Groups	91.76	419	0.219		
	Total	93.56	421			
Pop Ch 1980-1990	Between Groups	707.57	2	353.786	0.19	0.83
	Within Groups	782996.35	419	1868.726		
	Total	783703.92	421			
White Ch 1980-1990	Between Groups	367.07	2	183.534	4.34	0.01
	Within Groups	17706.39	419	42.259		
	Total	18073.46	421			
Kids Ch 1980-1990	Between Groups	124.26	2	62.131	6.22	0.00
	Within Groups	4188.22	419	9.996		
	Total	4312.49	421			
Travel	Between Groups	569.43	2	284.712	10.73	0.00
	Within Groups	11117.11	419	26.532		
	Total	11686.54	421			

Appendix A Cont.: ANOVA

	Sum of Squares		df	Mean Square	F	P-Value
Small Pop	Between Groups	5.01	2	2.503	11.80	0.00
	Within Groups	88.88	419	0.212		
	Total	93.89	421			
Medium Pop	Between Groups	0.20	2	0.1	0.45	0.64
	Within Groups	93.69	419	0.224		
	Total	93.89	421			
Large Pop	Between Groups	6.90	2	3.452	16.69	0.00
	Within Groups	86.65	419	0.207		
	Total	93.56	421			
Kids 1980	Between Groups	725.52	2	362.762	9.29	0.00
	Within Groups	16356.88	419	39.038		
	Total	17082.40	421			
Seniors 1980	Between Groups	45.23	2	22.615	0.62	0.54
	Within Groups	15226.78	419	36.341		
	Total	15272.01	421			

Appendix B: Post-HocTukeyTest

Variables:	City Type*	City Type*	Mean Diff.	S.E.	P-Value	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Suburb = 1	0	0					
		1	0.11	0.11	0.59	-0.15	0.36
		2	0.21	0.06	0.00	0.06	0.36
	1	0	-0.11	0.11	0.59	-0.36	0.15
		1					
		2	0.10	0.12	0.69	-0.18	0.38
	2	0	-0.21	0.06	0.00	-0.36	-0.06
		1	-0.10	0.12	0.69	-0.38	0.18
White 80	0	0					
		1	-6.83	4.79	0.33	-18.11	4.45
		2	-7.84	2.82	0.02	-14.47	-1.22
	1	0	6.83	4.79	0.33	-4.45	18.11
		1					
		2	-1.02	5.29	0.98	-13.47	11.44
	2	0	7.84	2.82	0.02	1.22	14.47
		1	1.02	5.29	0.98	-11.44	13.47
		2					
Res. Stability	0	0					
		1	0.44	2.04	0.97	-4.35	5.23
		2	2.98	1.19	0.03	0.18	5.78
	1	0	-0.44	2.04	0.97	-5.23	4.35
		1					
		2	2.54	2.24	0.50	-2.74	7.82
	2	0	-2.98	1.19	0.03	-5.78	-0.18
		1	-2.54	2.24	0.50	-7.82	2.74
		2					

* There are three different categories of cities. A city that did not proposed any ballot measures during the study period = 0. A city that proposed but failed to adopt any = 1. Finally, a city that proposed and adopted at least 1 anti-growth ballot measure = 2.

Appendix B Cont.: Post-HocTukeyTest

Variables:	City Type*	City Type*	Mean Diff.	S.E.	P-Value	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Homeownership	0	0					
		1	-2.08	3.07	0.78	-9.30	5.14
		2	2.27	1.80	0.42	-1.97	6.52
	1	0	2.08	3.07	0.78	-5.14	9.30
		1					
		2	4.35	3.39	0.40	-3.62	12.32
	2	0	-2.27	1.80	0.42	-6.52	1.97
		1	-4.35	3.39	0.40	-12.32	3.62
		2					
Low-income 1980	0	0					
		1	0.25	0.10	0.04	0.01	0.49
		2	0.20	0.06	0.00	0.06	0.35
	1	0	-0.25	0.10	0.04	-0.49	-0.01
		1					
		2	-0.04	0.11	0.93	-0.31	0.22
	2	0	-0.20	0.06	0.00	-0.35	-0.06
		1	0.04	0.11	0.93	-0.22	0.31
		2					
Middle Income 1980	0	0					
		1	-0.09	0.10	0.68	-0.33	0.16
		2	-0.05	0.06	0.71	-0.19	0.10
	1	0	0.09	0.10	0.68	-0.16	0.33
		1					
		2	0.04	0.12	0.94	-0.23	0.31
	2	0	0.05	0.06	0.71	-0.10	0.19
		1	-0.04	0.12	0.94	-0.31	0.23
		2					

Appendix B Cont.: Post-HocTukeyTest

Variables:	City Type*	City Type*	Mean Diff.	S.E.	P-Value	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
High Income 1980	0	0					
		1	-0.16	0.10	0.28	-0.40	0.09
		2	-0.16	0.06	0.03	-0.30	-0.01
	1	0	0.16	0.10	0.28	-0.09	0.40
		1					
		2	0.00	0.11	1.00	-0.27	0.27
	2	0	0.16	0.06	0.03	0.01	0.30
		1	0.00	0.11	1.00	-0.27	0.27
		2					
Pop Ch 1980-1990	0	0					
		1	-3.62	9.52	0.92	-26.02	18.77
		2	2.46	5.60	0.90	-10.70	15.62
	1	0	3.62	9.52	0.92	-18.77	26.02
		1					
		2	6.08	10.51	0.83	-18.65	30.81
	2	0	-2.46	5.60	0.90	-15.62	10.70
		1	-6.08	10.51	0.83	-30.81	18.65
		2					
White Ch 1980-1990	0	0					
		1	-3.18	1.43	0.07	-6.55	0.18
		2	-1.82	0.84	0.08	-3.80	0.16
	1	0	3.18	1.43	0.07	-0.18	6.55
		1					
		2	1.37	1.58	0.66	-2.35	5.08
	2	0	1.82	0.84	0.08	-0.16	3.80
		1	-1.37	1.58	0.66	-5.08	2.35
		2					

Appendix B Cont.: Post-HocTukeyTest

Variables:	City Type*	City Type*	Mean Diff.	S.E.	P-Value	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Kid Ch 1980-1990	0	0					
		1	0.47	0.70	0.78	-1.17	2.11
		2	1.44	0.41	0.00	0.48	2.40
	1	0	-0.47	0.70	0.78	-2.11	1.17
		1					
		2	0.97	0.77	0.42	-0.84	2.78
	2	0	-1.44	0.41	0.00	-2.40	-0.48
		1	-0.97	0.77	0.42	-2.78	0.84
		2					
Travel	0	0					
		1	-1.91	1.13	0.21	-4.57	0.76
		2	-2.98	0.67	0.00	-4.55	-1.41
	1	0	1.91	1.13	0.21	-0.76	4.57
		1					
		2	-1.08	1.25	0.67	-4.02	1.87
	2	0	2.98	0.67	0.00	1.41	4.55
		1	1.08	1.25	0.67	-1.87	4.02
		2					
		2					
Small Pop	0	0					
		1	0.16	0.10	0.24	-0.07	0.40
		2	0.28	0.06	0.00	0.14	0.42
	1	0	-0.16	0.10	0.24	-0.40	0.07
		1					
		2	0.12	0.11	0.55	-0.15	0.38
	2	0	-0.28	0.06	0.00	-0.42	-0.14
		1	-0.12	0.11	0.55	-0.38	0.15
		2					

Appendix B Cont.: Post-HocTukeyTest

Variables:	City Type*	City Type*	Mean Diff.	S.E.	P-Value	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Medium Pop	0	0					
		1	-0.02	0.10	0.98	-0.27	0.22
		2	0.06	0.06	0.64	-0.09	0.20
	1	0	0.02	0.10	0.98	-0.22	0.27
		1					
		2	0.08	0.12	0.79	-0.20	0.35
	2	0	-0.06	0.06	0.64	-0.20	0.09
		1	-0.08	0.12	0.79	-0.35	0.20
		2					
Large Pop	0	0					
		1	-0.14	0.10	0.33	-0.38	0.09
		2	-0.34	0.06	0.00	-0.48	-0.20
	1	0	0.14	0.10	0.33	-0.09	0.38
		1					
		2	-0.19	0.11	0.19	-0.45	0.07
	2	0	0.34	0.06	0.00	0.20	0.48
		1	0.19	0.11	0.19	-0.07	0.45
		2					
Kids 1980	0	0					
		1	3.82	1.38	0.02	0.59	7.06
		2	2.89	0.81	0.00	0.99	4.79
	1	0	-3.82	1.38	0.02	-7.06	-0.59
		1					
		2	-0.93	1.52	0.81	-4.50	2.64
	2	0	-2.89	0.81	0.00	-4.79	-0.99
		1	0.93	1.52	0.81	-2.64	4.50
		2					

Appendix B Cont.: Post-HocTukeyTest

Variables:	City Type*	City Type*	Mean Diff.	S.E.	P-Value	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Seniors 1980	0	0					
		1	-0.63	1.33	0.88	-3.75	2.49
		2	0.74	0.78	0.61	-1.09	2.58
	1	0	0.63	1.33	0.88	-2.49	3.75
		1					
		2	1.37	1.47	0.62	-2.08	4.82
	2	0	-0.74	0.78	0.61	-2.58	1.09
		1	-1.37	1.47	0.62	-4.82	2.08
		2					

Appendix C: Correlation Matrix , Logistic Regression Variables

		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}
X_1	PROPOSE	1	0.841**	0.189**	0.164**	-0.113*	0.010	-0.220**	0.045	0.175**	0.042	0.131**	-0.172**
X_2	ADOPT		1	0.173**	0.150**	-0.126**	-0.047	-0.177**	0.049	0.128**	0.028	0.102*	-0.166**
X_3	Suburb			1	0.030	0.142**	0.112*	-0.485**	-0.102*	0.588**	-0.076	-0.187**	-0.431**
X_4	White 1980				1	-0.069	0.315**	-0.178**	-0.131**	0.310**	-0.099*	0.289**	0.020
X_5	Residential Stability					1	0.471**	-0.198**	-0.116*	0.315**	-0.551**	0.106*	-0.334**
X_6	Homeownership						1	-0.238**	-0.175**	0.414**	-0.002	0.128**	-0.355**
X_7	Low Income 1980							1	-0.502**	-0.499**	0.095	0.072	0.349**
X_8	Middle Income 1980								1	-0.499**	0.085	-0.046	0.182**
X_9	High Inc 1980									1	-0.180**	-0.026	-0.532**
X_{10}	Pop Ch 1980-1990										1	-0.158**	0.216**
X_{11}	White Ch 1980-1990											1	-0.035
X_{12}	Kids Ch 1980-1990												1
X_{13}	Travel												
X_{14}	Strategic Interaction												
X_{15}	Metro Hierarchy												
X_{16}	Small City												
X_{17}	Medium City												
X_{18}	Big City												
X_{19}	Kids 1980												
X_{20}	Seniors 1980												
X_{21}	SF Region												
X_{22}	LA Region												
X_{23}	Central Valley												
X_{24}	Other Region												

*p < .05 **p < .01

Appendix C Cont.: Correlation Matrix, Logistic Regression Variables

	X_{13}	X_{14}	X_{15}	X_{16}	X_{17}	X_{18}	X_{19}	X_{20}	X_{21}	X_{22}	X_{23}	X_{24}
PROPOSE	0.245**	0.383**	0.047	-0.231**	-0.012	0.244**	-0.189**	-0.036	0.233**	0.019	-0.201**	-0.052
ADOPT	0.208**	0.350**	0.019	-0.227**	-0.026	0.254**	-0.170**	-0.039	0.173**	0.045	-0.198**	-0.037
Suburb	0.607**	0.422**	0.179**	-0.434**	0.179**	0.256**	-0.119*	-0.279**	0.249**	0.404**	-0.453**	-0.290**
White 1980	-0.018	0.145**	0.363**	0.068	0.040	-0.109*	-0.622**	0.365**	0.181**	-0.174**	-0.106*	0.122*
Residential Stability	0.231**	-0.057	0.212**	0.089	-0.019	-0.070	0.127**	-0.065	0.222**	-0.038	-0.026	-0.151**
Homeownership	0.293**	0.061	0.550**	0.128**	0.017	-0.145**	0.173**	-0.031	0.131**	0.007	0.006	-0.143**
Low Income 1980	-0.375**	-0.369**	-0.505**	0.361**	-0.086	-0.275**	0.156**	0.219**	-0.280**	-0.250**	0.353**	0.224**
Middle Income 1980	-0.191**	0.046	0.056	-0.097*	0.041	0.056	-0.014	0.084	-0.122*	0.044	-0.022	0.092
High Inc 1980	-0.567**	0.324**	0.450**	-0.264**	0.045	0.220**	-0.142**	-0.303**	0.402**	0.206**	-0.331**	-0.317**
Pop Ch 1980-1990	-0.022	0.006	-0.029	0.065	0.037	-0.102*	0.195**	-0.033	-0.141**	0.041	0.142**	-0.043
White Ch 1980-1990	-0.100*	0.029	0.094	0.203**	0.072	-0.276**	-0.254**	0.240**	0.157**	-0.353**	-0.030	0.279**
Kids Ch 1980-1990	-0.523	-0.244**	-0.363**	0.202**	-0.035	-0.167**	-0.203**	0.454**	-0.229**	-0.178**	0.258**	0.182**
Travel	1	0.411**	0.103*	-0.347**	0.054	0.294**	0.078	-0.351**	0.374**	0.351**	-0.362**	-0.425**
Strategic Interaction		1	0.025	-0.333**	0.065	0.268**	-0.170**	-0.085	0.425**	0.086	-0.411**	-0.132**
Metro Hierarchy			1	-0.098*	0.119*	-0.021	-0.004	-0.187**	-0.007	-0.003	-0.02	0.03
Small City				1	-0.502**	-0.499**	0.055	0.305**	-0.110*	-0.303**	0.228**	0.237**
Medium City					1	-0.499**	-0.026	-0.05	0.035	0.013	-0.009	-0.041
Big City						1	-0.029	-0.256**	0.075	0.290**	-0.219**	-0.196**
Kids 1980							1	-0.606**	-0.214**	0.077	0.272**	-0.138**
Seniors 1980								1	-0.035	-0.162**	0.020	0.201**
SF Region									1	-0.405**	-0.252**	-0.276**
LA Region										1	-0.377**	-0.413**
Central Valley											1	-0.257**
Other Region												1

Appendix D: Correlation Matrix, OLS Variables

		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}
X_1	PROPOSE 1986-1998	1	0.826**	0.154**	0.158**	0.146**	0.001	-0.030	-0.190**	0.158**	0.173**	0.147**	0.152**
X_2	ADOPT 1986-1998		1	0.182**	0.184**	0.175**	0.059	-0.025	-0.157**	0.138**	0.137**	0.177**	0.180**
X_3	Housing 00			1	0.985**	0.987**	0.155**	0.159**	0.013	-0.095*	-0.03	0.999**	0.989**
X_4	Single-Family 00				1	0.946**	0.126**	0.173**	0.009	-0.104*	-0.014	0.981**	0.998**
X_5	Multi-Family 00					1	0.175**	0.142**	0.013	-0.082	-0.041	0.990**	0.955**
X_6	Rental 00						1	0.180**	0.387**	-0.396**	-0.567**	0.157**	0.136**
X_7	Black 00							1	0.082	-0.365**	-0.144**	0.157**	0.168**
X_8	Hispanic 00								1	-0.867**	-0.451**	0.011	0.008
X_9	White 00									1	0.347**	-0.093*	-0.104*
X_{10}	Median Income 00										1	-0.029	-0.014
X_{11}	Housing 90											1	0.987**
X_{12}	Single-Family 90												1
X_{13}	Multi-Family 90												
X_{14}	Rental 90												
X_{15}	Black 90												
X_{16}	Hispanic 90												
X_{17}	White 90												
X_{18}	Median Income 90												
X_{19}	Density 90												
X_{20}	Inc. Yr.												
X_{21}	Suburb												
X_{22}	Res. Stability												
X_{23}	Homeownership												
X_{24}	Vacant												
X_{25}	Travel												
X_{26}	Job Ch												

*p < .05 **p < .01

Appendix D: Correlation Matrix, OLS Variables

	X_{13}	X_{14}	X_{15}	X_{16}	X_{17}	X_{18}	X_{19}	X_{20}	X_{21}	X_{22}	X_{23}	X_{24}	X_{25}
PROPOSE 1986-1998	0.141**	-0.027	-0.039	-0.190**	0.175**	0.164**	0.059	-0.013	-0.166**	-0.108*	0.024	0.100*	0.191**
ADOPT 1986-1998	0.171**	0.035	-0.02	-0.162**	0.150**	0.129**	0.088	-0.026	-0.161**	-0.089	-0.026	0.019	0.146**
Housing 00	0.986**	0.133**	0.176**	0.001	-0.085	-0.017	0.143**	-0.204**	0.056	-0.055	-0.130**	0.052	0.086
Single-Family 00	0.944**	0.104*	0.184**	-0.007	-0.085	0.002	0.125**	-0.208**	0.042	-0.067	-0.095*	0.043	0.118*
Multi-Family 00	0.999	0.155**	0.164**	0.006	-0.081	-0.031	0.156**	-0.196**	0.068	-0.039	-0.156**	0.055	0.056
Rental 00	0.175**	0.960**	0.206**	0.358**	-0.386**	-0.592**	0.517**	-0.382**	0.130**	-0.321**	-0.936**	-0.062	-0.287**
Black 00	0.143**	0.162**	0.928**	0.016	-0.321**	-0.108**	0.162**	-0.068	-0.102*	-0.202**	-0.161**	0.157**	0.227**
Hispanic 00	0.012	0.406**	0.088	0.975**	-0.875**	-0.446**	0.321**	-0.03	0.158**	-0.009	-0.382**	-0.098*	-0.063
White 00	-0.081	-0.390**	-0.361**	-0.847**	0.972**	0.324**	-0.452**	0.034	0.028	-0.004	0.349**	0.112*	-0.107*
Median Income 00	-0.04	-0.591**	-0.122**	-0.398**	0.338**	0.967**	-0.109*	0.199**	-0.487**	0.378**	0.618**	-0.130**	0.386**
Housing 90	0.989**	0.136**	0.177**	0.003	-0.088	-0.016	0.150**	-0.206**	0.054	-0.043	-0.133**	0.045	0.084
Single-Family 90	0.954**	0.110*	0.184**	-0.004	-0.089	0.003	0.137**	-0.207**	0.040	-0.046	-0.100*	0.031	0.111*
Multi-Family 90	1	0.156**	0.166**	0.008	-0.083	-0.031	0.159**	-0.198**	0.067	-0.036	-0.158**	0.054	0.057
Rental 90		1	0.204**	0.385**	-0.398**	-0.625**	0.477**	-0.328**	0.178**	-0.360**	-0.971**	-0.079	-0.313**
Black 90			1	0.031	-0.356**	-0.102*	0.205**	-0.056	-0.101*	-0.156**	-0.199**	0.098*	0.171**
Hispanic 90				1	-0.895**	-0.396**	0.339**	0.030	0.127**	0.060	-0.356**	-0.141**	-0.055
White 90					1	0.319**	-0.460**	-0.019	0.009	-0.059	0.358**	0.146**	-0.075
Median Income 90						1	-0.081	0.241**	-0.524**	0.371**	0.650**	-0.100*	0.435**
Density 90							1	-0.039	-0.296**	0.079	-0.424**	-0.176**	0.207**
Inc. Yr.								1	-0.357**	-0.01	0.296**	0.115*	0.252**
Suburb									1	-0.142**	-0.210**	0.043	-0.550**
Res. Stability										1	0.433**	-0.439**	0.046
Homeownership											1	-0.105*	0.375**
Vacant												1	-0.052
Travel													1
Job Ch													

Appendix D: Correlation Matrix, OLS Variables

	X_{26}	X_{27}	X_{28}	X_{29}
PROPOSE 1986-1998	-0.258**	-0.016	-0.164**	-0.026
ADOPT 1986-1998	-0.227**	0.016	-0.191**	-0.01
Housing 00	-0.038	0.08	-0.054	-0.056
Single-Family 00	-0.056	0.088	-0.054	-0.071
Multi-Family 00	-0.022	0.068	-0.052	-0.04
Rental 00	0.299**	-0.022	0.056	0.126**
Black 00	0.084	0.125**	-0.083	-0.139**
Hispanic 00	0.678**	0.144**	0.245**	-0.095*
White 00	-0.546**	-0.218	-0.137**	0.224**
Median Income 00	-0.589**	0.07	-0.309**	-0.240**
Housing 90	-0.038	0.087	-0.062	-0.057
Single-Family 90	-0.056	0.09	-0.06	-0.07
Multi-Family 90	-0.021	0.075	-0.057	-0.042
Rental 90	0.350**	-0.044	0.098*	0.118*
Black 90	0.074	0.107*	-0.102*	-0.126**
Hispanic 90	0.666**	0.154**	0.207**	-0.083
White 90	-0.574**	-0.213	-0.122**	0.187**
Median Income 90	-0.594**	0.187**	-0.327**	-0.266**
Density 90	0.047	0.298**	-0.150**	-0.194**
Inc. Yr.	-0.052	0.291**	-0.092*	-0.124**
Suburb	0.473**	-0.444**	0.478**	0.311**
Res. Stability	-0.055	-0.038	-0.026	-0.151**
Homeownership	-0.342**	0.028	-0.068	-0.159**
Vacant	-0.062	0.145**	-0.142**	0.088
Travel	-0.266**	0.372**	-0.281**	-0.428**
Job Ch	1	-0.189**	0.494**	0.096*