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LOCAL LAND-USE REGULATION
AND URBAN HOUSING VALUES

By

Stuart A. Gabriel

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LOCAL LAND-USE REGULATION

AND

URBAN HOUSING VALUES*

by

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1. **Introduction**

The phenomenon of increasing regulation of land use by local governments has become widespread, particularly in suburbs of large metropolitan regions. Most common among the variety of available land-use policy tools are large-lot zoning, architectural and building structure specifications, development fees, open-space and agricultural preserve dedication, public-land acquisition, sewer- and water-connection moratoria, phased zoning, and comprehensive growth-management plans. While the precise techniques vary by jurisdiction, many localities now employ a package of policy instruments which to a greater or lesser extent, define the type, density, location, and timing of development occurring within jurisdictional bounds.

A variety of explanations have been offered for local-government adoption of specific land-use policies. Motivations cited by conventional analyses include:

1. urban service provision and environmental problems occasioned by rapid growth,
2. community fiscal difficulties incurred by development which fails to "pay its own way," and
3. desires of local residents to maximize property values, and minimize social problems and redistribution by excluding noxious populations and land uses.

For example, based on a nationwide survey of growth-management planning, Gleeson et al. (1975) describe three explanations for local invocation of growth management including control of escalating public-service
costs, maintenance of a particular life-style, and environmental preservation. Similarly, a report on ten California communities (California Office of Planning and Research, 1976) identifies maintenance of adequate service levels and environmental protection as common reasons for the adoption of growth-management plans.

According to Babcock (1966), Downs (1973), Hughes (1975) and others, local governments use development regulations as a means to manipulate urban-housing prices, preserve residential property values and thereby maintain barriers-to-entry for the service-dependent, low-income, and minority segments of the population. Akin to fiscal zoning regimes which require development to cover marginal costs, these barriers-to-entry minimize redistribution and local taxes. They also serve the interest of home owners cum real estate investors seeking to exploit not only the use value of their homes (for shelter and neighborhood amenities) but their exchange value as well (Ellickson, 1977; Fischel, 1977). Local land-use regulation may reflect community desires to "make its own residents better off at the expense of newcomers and outsiders," as White (1975) suggests, whereas Portney and Sonstelie (1978) offer municipal "profit maximization" as a normative criterion in development decisions.

More aggregative or structuralist perspectives have been outlined by Castells (1976), Markusen (1976) and Dear (1979). These analysts suggest that local state land-use allocation practices are strategies to maximize property values and defend turf, but also argue that these policies are a powerful force in defining and maintaining the class-segregated nature of urban areas. Metropolitan-area disparities in community, environmental and social resources result in a self-reinforcing process by which
the restriction of local opportunities is reflected in persistent income differentials. Such an outcome is largely effectuated by protective land-use practices of the local state, which maintain housing-price barriers and minimize redistribution. Peet (1975) and Dear (1979) argue that in this manner class divisions necessary for continued capitalist expansion are sustained.

In our view, such arguments concerning urban service delivery and environmental quality, fiscal balance, property value maximization, and social reproduction are clearly important but also are seductively simple. Despite the continued attention of lawyers, economists, and policy makers to land-use regulation and control, the effects of such policies have neither been adequately documented nor, more importantly, effectively linked to the motives for use of controls. Within a given ideological framework, all jurisdictions are implicitly assumed by analysts to share the same rationale for their development policies; the possibility of heterogeneous, multiple, or changing motives producing similar outcomes has not been fully considered or included in these analyses.

The purpose of the present paper is to present empirical evidence on the impact of land-use policy tools on urban-housing values and to offer a speculative analysis of motivations for the adoption of such tools. Our analysis is based on recent statistical data from the San Francisco Bay Area, as well as interviews with local government officials there. On the basis of our information and perceptions, we argue that local land-use regulations do exert an independent and important effect on the
level of housing prices in the Bay Area, but that there are a variety of motivations for local-government land-development behavior. This diversity suggests the necessity of a closer scrutiny of local situations in order to understand the antecedents and impacts of local land-use policy.

2. The Effects of Local Land-Use Regulation on Housing Values

2.1 A Brief Review of Related Studies

A variety of studies attempt to evaluate empirically the impact of local development policies on housing values. While these studies have had mixed results, more recent attempts indicate that restrictive development practices are reflected in increased housing prices.

Studies by Crecine, Davis, and Jackson (1967); Reuter (1973); Stull (1975); Peterson (1974); and Sternlieb and Sagalyn (1972) investigate the impact of zoning regulations on housing values. The Crecine et al. and Reuter analyses use Pittsburg data in evaluating the property-value impacts of mixed land-use patterns. Regression results show that homogeneity of land use per se has little effect on housing prices, contradicting the notion that neighborhood externalities stemming from nonresidential land uses negatively influence housing prices. The Crecine et al. study is criticized, however, with regard to omission of housing structure characteristics from the regression as well as the restrictive definition of neighborhood from which each sample of properties was drawn. As Stull (1975) points out, the influence of the land-use environment may have been inadvertently controlled for, in that all properties included in a particular regression were drawn from the same neighborhood. While Reuter corrects for some of these problems by redefining neighborhood boundaries and
including assessed valuation of housing structure among his independent variables, Crone (1980) criticizes his results as well as those of Crecine et al. in that they inappropriately interpret chi square tests used in evaluating zoning and externality housing-price effects.

Stull (1975), Peterson (1974), and Sternlieb and Sagalyn (1972) also employ multiple-regression techniques to estimate the housing price effects of zoning ordinances. Variables used in these studies to proxy local zoning policies range from (1) percent of community land devoted to nonsingle-family residential use (Stull); (2) minimum lot sizes (Peterson, Sternlieb and Sagalyn); (3) type of residential uses allowed (Peterson); and (4) lot frontage requirements (Sternlieb and Sagalyn).

Peterson argues against the aggregative view of zoning property value impacts taken by the Crecine et al. and Reuter studies, sorting out significant direct and indirect effects. He finds a large, frame house worth 8 percent more in an area allowing conversion to two-family use than in neighborhoods constrained to single-family use. Further, average half-acre lots in his suburban Boston sample are worth $1,700 less if limited to 40,000 square-foot lot-size requirements, rather than zoned for development in 10,000 square-foot lots. Peterson also shows substantial positive indirect zoning property value impacts, in its function to control the character of neighborhood development and resultant community tax base. Stull investigates the single-family housing-price impacts of community zoning patterns, as relates to the proportion of community land area devoted to commercial, industrial, institutional, and agricultural, as well as multifamily uses. His findings suggest significant price effects related to
community land-use allocation, with homeowners paying a premium for housing in communities with high, single-family residential land-use allocations.

Other studies have attempted to demonstrate the housing cost effects of building codes, subdivision regulations, and development impact fees. Using FHA data for a cross-section of SMSAs, Muth and Wetzler (1976) evaluate restrictive building code impacts on housing construction outlays. Results of this study suggest that structure costs increase by approximately 2 percent in those areas imposing strict building practices. Gabriel, Katz, and Wolch (1980) calculate a San Francisco Bay Area regional mean development fee level of $1,121 per standard single-family home in 1976, suggesting as well a variety of motivations associated with community fee imposition. These findings concur with those of Friedan (1979) who suggests that Bay Area community special charges for the use of public services can sometimes add more than $5,000 to the cost of a single-family home. The Urban Land Institute and Gruen and Gruen Associates (1977), in their discussion of the effects of local regulations on housing costs in Jacksonville, Florida, suggest that between 1970 and 1976 average cost increases resulting from changing subdivision standards were $830 per lot in real terms. These controls regulate water service, sewage collection, drainage, and street systems within the subdivision. To this calculation must be added per lot increases of $185 in connection fees and $150 in building code requirements. In these studies the evaluation of "necessary" versus "excessive" components of building codes and subdivision requirements is
largely subjective however, and little attempt is made to measure changes in community-provided benefits stemming from increased regulatory costs.

Only a few studies have attempted to sort out the housing price effects of community growth management plans. The 1977 Urban Land Institute and Gruen and Gruen Associates' study of growth management practices in San Jose, California, attribute 20 to 30 percent of 1967-76 housing cost increases, or 43 percent of the 121 percent 1968-76 increase in the price of a standard home to growth management practices. Yet there appears little justification for the authors' assertion that the entirety of land price increases over this period was due to the growth management regime. Schwartz et al. (1979) analyzed the impact of Petaluma's growth management plan, comparing housing-price dynamics in Petaluma to those in neighboring jurisdictions. While this study shows Petaluma's prices rose more quickly than those in one of two neighboring jurisdictions, their price equation suffers from omission of important local property tax, public expenditure, and accessibility variables which, over the study period, may have affected price changes. Also, the use of two- and three-way interactive terms in their analysis poses considerable problems with regard to interpretation of results.

These studies illustrate attempts by various authors to evaluate empirically both direct and indirect housing price effects of local land-use regulation. For those studies of builder cost impacts of building codes, subdivision regulations, and development fees, the relevant price effects vary with housing market reorientation and the pertinent submarket price elasticity of demand. The above studies suggest that in certain
cases these effects may be substantial and, in this regard, motivate our empirical work in this area.

2.2 Regression Analysis of Bay Area Housing Prices

As in previous studies, our analysis employs multiple regression procedures to determine the impact of local development policies on housing prices. The sample consists of fifty Bay Area jurisdictions (listed in Appendix A), exclusive of central cities. In addition, the sample excludes those jurisdictions for which only a limited amount of housing information was available. The model tested is:

\[ P_i = B_0 + B_1 S_i + B_2 N_i + B_3 V_i + B_4 A_i + B_5 R_i + U_i \]

where:

- \( P_i \) = housing price in jurisdiction \( i \)
- \( S_i \) = structural characteristics of housing units in jurisdiction \( i \)
- \( N_i \) = neighborhood and local public finance characteristics in jurisdiction \( i \)
- \( V_i \) = vacancy rate in jurisdiction \( i \)
- \( A_i \) = accessibility to employment of jurisdiction \( i \)
- \( R_i \) = community land-use policies.

The dependent variable of the regression equation is mean 1976 price of community housing. This variable was generated on the basis of individual

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1This procedure has the important drawback of disallowing for inter-jurisdictional substitution of housing, implicitly assuming that each jurisdiction is a separate housing submarket. Such is clearly not always the case.
sales price information on transactions occurring in 1976, recorded by the Society of Real Estate Appraisers. These records include transactions of both single-family and multifamily, owner-occupied homes. This dependent variable is regressed on control variables representing structural features of sample homes (age of unit and square feet of living space), neighborhood characteristics (median household income and percent nonwhite children enrolled in local schools), access to employment opportunities, local public finance variables (school expenditures and composite property tax rate), vacancy rates in each jurisdiction, and local development policies (see Appendix B for data descriptions and sources).

Three development policy variables are employed in the analysis. These variables have not been employed in previous studies, and together they represent the basic outlines of community-development policy and stance toward growth. First, the extent of large-lot zoning on remaining, developable community land indicates the type and density of planned development. This variable is superior to minimum lot-size specifications; for instance, jurisdictions will often have a small minimum lot size theoretically but will have zoned the vast majority of land to large lots. A second variable is development fees and exactions. Categories of fees

Although the mean housing prices were calculated from sample of varying sizes, the mean sample size (506) is sufficiently large to avoid problems of heteroskedasticity. A plot of residuals supports this view.
range from school impact fees, to water-connection charge, to recreation-facility levies. Development fees are likely to be employed by jurisdictions as a user charge for public services to incoming residents; however, the broad range of fee levels across the Bay Area jurisdictions suggests that they may be used as a means to discourage low- or moderate-cost housing development. Finally, local government constraint on development is proxied by a dummy variable reflecting city council attitudes toward growth. This variable takes on the value of one where a majority of city council members favored continued residential growth and development in 1976. As such, the variable is taken to reflect prevailing resident attitudes regarding expansion and indicates the presence or absence of informal but pervasive and effective local controls associated with the development process, such as extensive, municipal processing delays, ambiguous development directives, and the utilization of regulations affecting development which are specific to individual localities.

As illustrated in table 1, results of the regression analysis suggest that local land-use regulation has a perceptible and significant impact on Bay Area housing prices. Control variables are all of appropriate magnitude and sign. As expected, based on theoretical and empirical grounds, the amount of living space was a primary determinant of price; and neighborhood characteristics, vacancy rates, access, and local public finance features also affect the price of community housing.  

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3 See Gabriel, Katz and Wolch (1980) for a complete description of Bay Area fees.

4 For example, a one percentage increase in the proportion of minority students decreases housing prices by $200-250. Income and house size
TABLE 1
SELECTED REGRESSION RESULTS
(Dependent Variable: Mean Value of Owner-Occupied Housing)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Regression Coefficients (t-ratios in parentheses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square feet of living space</td>
<td>46 (4.9*) 51 (6.4*)</td>
</tr>
<tr>
<td>Age of housing</td>
<td>45 (.2) 32 (.1) 47 (1.8*)</td>
</tr>
<tr>
<td>Log (composite property tax rate)</td>
<td>-18,051 (-1.6*) -15,296 (-1.4*) -38,767 (-3.1*)</td>
</tr>
<tr>
<td>Log (dollars per unit of average daily attendance)</td>
<td>23,572 (2.3*) 25,080 (2.4*) 27,000 (2.0*)</td>
</tr>
<tr>
<td>Percent minority children enrolled in local schools</td>
<td>-212 (-2.1*) -254 (-1.7*) -231 (1.9*)</td>
</tr>
<tr>
<td>Mean household annual income</td>
<td>.6 (1.1) 2.1 (3.4*)</td>
</tr>
<tr>
<td>Access to employment</td>
<td>1,038 (1.1) 1,136 (1.2)</td>
</tr>
<tr>
<td>Attitudes toward growth (1=favor growth)</td>
<td>-4,001 (-1.5*) -4,530 (-1.7*) -6,400 (-2.0*)</td>
</tr>
<tr>
<td>Development fees and exactions</td>
<td>-.9 (-.6) -.1 (-.7) -1 (-.8)</td>
</tr>
<tr>
<td>Percent land zoned for lots of one acre or more</td>
<td>3,164 (.4) 3,351 (.4) 19,000 (2.0*)</td>
</tr>
<tr>
<td>Vacancy rate</td>
<td>-.814 (-1.4*) -.907 (-1.6*) -.570 (-.8)</td>
</tr>
<tr>
<td>Constant</td>
<td>-142,100 (-1.7*) -154,560 (-1.8*) -61,421 (-.6)</td>
</tr>
<tr>
<td>R² (adjusted)</td>
<td>.84 .84 .74</td>
</tr>
<tr>
<td>F-Statistic</td>
<td>23.6 25.8 16.9</td>
</tr>
</tbody>
</table>

See following page for table footnotes.
*Indicates significance at alpha = .05.

1These results are obtained via ordinary least square techniques (OLS). Various authors estimating similar equations have presented two-stage, as well as OLS results, to take account of possible simultaneous relationships between property values and local public finance variables. In these cases (i.e., Oates, 1969; Stull, 1975), results were quite similar and, thus, only OLS was employed here.

2Following Oates (1969), the local public finance variables are estimated in log form. This appears appropriate in that we would expect each additional dollar of educational expenditure per unit of average daily attendance to yield increasingly small changes in benefits. Similarly, the impact of a given absolute change in tax rate should diminish as tax rates increase and, thus, property values should not vary simply as a linear function of level of tax rate.

3Access is defined as the ratio:

$$A_i = \sum_{j=1}^{15} \frac{E_{ij}}{t_{ij}}$$

where $E_j$ = number of jobs in subregional employment center $j$ in 1978;

$t_{ij}$ = 1975 peak auto commute times between jurisdiction $i$ and employment center $j$; and

$A_i$ = access of jurisdiction $i$ to regional employment opportunities.
For our purpose, the critical portions of the analysis are the sign and magnitude of the community land-use policy coefficients. The variable reflecting city council attitudes toward growth is consistently significant, and the estimated coefficient value suggests that housing values fall by about $4200 as a result of progrowth stances on the part of the local representatives. This is equivalent to approximately 8 percent of mean-sample home value. While the form of the variable disallows insight into the respective effects of the myriad regulations and informal practices associated with cities not favoring growth, it nonetheless appears to capture the aggregate nature of local government practices, which are strongly related to housing price.

Local development fees and exactions are related in an approximately one-to-one manner to housing prices, with each dollar increase in development fee associated with a similar decrease in price of home. This indicates their function as a service charge or tax which, like other taxes, should be negatively capitalized into price. The fee variable is not statistically significant, however, and inspection of the fee data alongside other community characteristics suggests that the regression results mask different motivations in the use of fees.  

are collinear, but both are positively related to home price, as is access to employment. The local finance proxies behave in a manner consistent with other studies, with a $200 change in educational expenditures per unit of average daily attendance being reflected in a $560 increase in housing price, and an increase in property tax rate from 11 to 12 percent yielding a $2100 reduction in mean price of home.

5In steadily growing, unrestricted towns with inadequate infrastructure, fees are quite high, so as to cover the cost of additional urban services. In unrestricted towns that have only very recently experienced growth, fees were still low in 1976, but subsequently rose as the fiscal
Exclusionary zoning in the form of large-lot zoning adds substantially to housing values. The estimated coefficient implies an approximate $3000 increase in mean home price associated with a change from 9 to 10 percent large-lot zoning of developable land. The significance of the variable is not stable; in equations including an accessibility or house size variable, the extent of large-lot zoning is not significant; while in specifications lacking one or both of these variables, large-lot zoning is highly significant, indicating interaction between housing size and lot size, and between lot sizes and distance to central zones of the metropolitan region.

Taken together, these results indicate that local government land-development policy exerts an important influence on housing price levels. After controlling for traditional determinants of house prices, community land-use controls account for approximately 14 percent of the price of a typical Bay Area home. This implies that such regulations can be effectively used to manipulate or ration access to residential opportunities. Nonetheless, it would be misleading to assume uniformity in community motivation in invocation of land-use regulation.

3. Motivations for Local Land-Use Controls

In this section we explore the bases for differential adoption of local government land development policies. While evidence reported in

implications of residential development became evident. A third category of unrestrictive cities are those which are older and more extensively developed. Here, fees are less important as an essentially complete urban infrastructure implies a lower marginal cost of new home construction.
section 2.2 suggests that local land-use regulation has substantial impact on community housing values, motivations associated with local adoption of particular land-use strategies appear diffuse and factors in addition to those described by the various theoretical constructs are pertinent. Some of these factors stem from the historical nature of urban development as it evolved in individual localities, while other land-use impacts have been induced by fiscal limitation measures implemented in California. In-depth analysis of some individual cities in our sample indicate several additional bases for a local policy stance toward growth including:

1. historical labor requirements of local production,
2. land-use mix and its fiscal implications,
3. interjurisdictional development policy spillovers, and
4. intertemporal spillovers of local government land-development behavior.

These issues, illustrated by case examples, are discussed in sections 3.1 through 3.5.

3.1 Private Gain and Social Reproduction

The views of land-use policy as a device for homeowner property value and wealth maximization, on the one hand, and as a tool for social reproduction of inequality and class structure, on the other, both imply that communities adopting stringent regulatory controls ought to be strongly differentiated from other communities with respect to neighborhood characteristics, local public finance, and housing prices. Both our regression analysis and a comparison of community profiles reveal that differences are
indeed striking in the Bay Area. The regression states that communities with different policies toward development are significantly different with respect to housing prices. It therefore implicitly defines two polar types of Bay Area jurisdictions, here termed "restrictive" and "unrestrictive" suburban cities. Sample cities where council members favored growth in 1976 and had allocated a minimal amount of developable land to low-density use (average 1 percent) are here deemed "unrestrictive;" whereas those jurisdictions not favoring growth and reserving large portions of land for large-lot housing development (average 34 percent) are described as "restrictive." Differences in local land-use policy positions in these two polar cases are further evidenced by the fact that restrictive jurisdictions planned a total of 14,763 dwelling units for their 13,388 acres (1.6 units/acre), while unrestricted communities had slated 178,231 units for future development on only 34,304 acres of land (7.4 units/acre).

Comparison of restrictive and unrestricted community profiles illustrates that local land-use policies are closely related to community characteristics as well as housing prices. Table 2 provides the basic data on the polar jurisdictional types, showing the striking contrast between them. Not only are virtually all residents of restrictive cities white, but their mean annual income is $21,499, or 34 percent higher than incomes of residents in unrestricted cities. They are also much more likely to be white collar workers, as opposed to blue-collar or service-sector employees. As expected on the basis of the regression analysis, housing prices are 75 percent higher in restrictive cities, where housing
<table>
<thead>
<tr>
<th>Profiles</th>
<th>Restrictive Cities</th>
<th>Unrestrictive Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population size</td>
<td>18,886</td>
<td>46,478</td>
</tr>
<tr>
<td>Mean household income</td>
<td>$21,494</td>
<td>$15,992</td>
</tr>
<tr>
<td>Percent minority</td>
<td>7</td>
<td>36</td>
</tr>
<tr>
<td>Percent white-collar workers</td>
<td>74</td>
<td>50</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean sales price</td>
<td>$77,000</td>
<td>$44,000</td>
</tr>
<tr>
<td>Mean size (sq. ft)</td>
<td>1,710</td>
<td>1,402</td>
</tr>
<tr>
<td>Condition (1 = poor; 6 = excellent)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Mean age</td>
<td>21.0</td>
<td>15.7</td>
</tr>
<tr>
<td>Vacancy rate</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Access to employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access index</td>
<td>1.9</td>
<td>1.35</td>
</tr>
<tr>
<td>(higher = greater access)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Public Finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite property tax rate</td>
<td>11.59</td>
<td>12.09</td>
</tr>
<tr>
<td>Educational expenditures per pupil</td>
<td>$1,522</td>
<td>$1,404</td>
</tr>
<tr>
<td>Local Land-Use and Development Policies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development fees</td>
<td>$1,348</td>
<td>$1,096</td>
</tr>
<tr>
<td>Percent land zoned for large lots</td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td>Total planned dwellings units (aggregate)</td>
<td>14,763</td>
<td>178,231</td>
</tr>
<tr>
<td>Mean density of planned development (units/acre)</td>
<td>1.6</td>
<td>7.4</td>
</tr>
<tr>
<td>Total remaining acres of developable land (aggregate)</td>
<td>13,388</td>
<td>34,304</td>
</tr>
</tbody>
</table>
units are generally larger, older, and more accessible to regional employment opportunities. Tax rates are lower, and per-pupil school expenditures are higher in restrictive localities as well.

These data support the contention that restrictive jurisdictions act to insure private gains and reproduction of community status. Further, they question the legitimacy of exclusionary zoning arguments based on service adequacy, environmental protection, and fiscal balance. An example of land-use policy in a representative restrictive jurisdiction lends further support to this conclusion.

Saratoga, California

Located in the South Bay area, Saratoga is a prototypical suburban jurisdiction in the restrictive class. As the boom in the high-technology sector has spurred population growth and residential development in the South Bay, Saratoga has managed to stave off expansionary pressures. As table 3 demonstrates, this locality remains high income, white, white collar, and small. At $94,000 per unit, housing prices are highest of any jurisdiction in the South Bay, and prior to Proposition 13, tax rates were the lowest.

This community profile has been accomplished and maintained largely by the adoption of a virulent, no-growth policy stance, embodied in the General Plan, zoning allocations, development procedures, and community action. The General Plan (1974) is replete with objectives concerning the maintenance of "Saratoga's rural character," "residential character," scenic beauty and environmental quality, and low noise levels. It further
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Population</td>
<td>29,000</td>
</tr>
<tr>
<td>Mean household income</td>
<td>27,630</td>
</tr>
<tr>
<td>Percent minority</td>
<td>5</td>
</tr>
<tr>
<td>Percent white-collar workers</td>
<td></td>
</tr>
<tr>
<td>Mean housing price</td>
<td>$94,000</td>
</tr>
<tr>
<td>Mean house size (sq. ft.)</td>
<td>2,154</td>
</tr>
<tr>
<td>Mean house age (years)</td>
<td>14</td>
</tr>
<tr>
<td>Development fees (per unit)</td>
<td>$1,496</td>
</tr>
<tr>
<td>Percent land zoned for large lots</td>
<td>45</td>
</tr>
<tr>
<td>Total planned dwelling units</td>
<td>2,875</td>
</tr>
<tr>
<td>Total remaining acres of developable land (acres)</td>
<td>2,387</td>
</tr>
<tr>
<td>Mean density of planned development (units/acre)</td>
<td>1</td>
</tr>
</tbody>
</table>
details subcommunity development plans, each of which begins by underscoring the desirability of low-density single-family housing, and proceeds to subordinate development options to the capacity of existing streets and lanes. The sole objective to hint at community redistribution policy suggests the advisability of providing senior Saratogans with "alternative" housing opportunities; community residents have consistently voted nay to elderly housing project proposals, however, and have vociferously sounded their opposition to such projects at city council meetings.  

Saratoga planners have slated almost 2900 units for future construction, at an average density of less than one unit per acre. Part of the rationale for low-density zoning is the hilly terrain characterizing a good portion of the city's remaining peripheral acreage, which has prompted the adoption of a slope density zoning ordinance. Despite the geological constraints, however, the stringency of this ordinance is undoubtedly based on exclusionary motives. This ordinance is complemented by open-space requirements which may necessitate the dedication of up to 35 percent of project acreage to open-space uses. Furthermore, even flat areas with acreage available for in-fill development, located within the city's built-up zone, are restricted to low-density development.

The development process in Saratoga presents numerous hurdles for prospective developers, and insures substantial local discretion over

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6 Information on community action, the politics of zoning, and development proposal processing is based on 1979 interviews with Robert Robinson, Planning Director, City of Saratoga.
project density and design. For example, an architectural review board must approve plans for each lot, and frequently imposes major design changes on developers. Also, the time frame for decision making on a typical development project is more than one year; a moratorium on development in one subcommunity planning district was proposed in late 1979, on the basis of transportation constraints.

Neither the aggregate community profile data nor the Saratoga case study definitely link land development policies to specific local motivations. The data are, however, highly suggestive. Most restrictive jurisdiction appear to use community land-allocation policies to support housing prices, thereby eliminating low-income, minority, and other noxious populations, undesirable land uses, and allowing the provision of high service levels at relatively low tax prices. In this way, both individual and social ends are served: private home equities and net worth are protected and expanded; redistributive public services are rendered unnecessary; and local character and opportunities are reproduced and replenished.

3.2 Historical Labor Requirements of Local Production

The absence of restrictive land-use policies may not reflect inclusive or redistributive preferences on the part of community residents. In fact, in making development decisions, some unrestrictive cities employ fiscal and social logic similar to their more restrictive counterparts, making development "pay its own way" and minimizing social costs of growth borne by the community. Historical patterns of development in some unrestrictive cities, however, impose constraints on current local development
options. Blue-collar labor requirements of local production have in these instances spurred urban development whose primary function has been the provision of low-cost housing and urban services required for social reproduction of an industrial labor force. Even as interregional employment and migration patterns shift, the low-value, community economic base developed in prior periods means that a wide range of development types can still generate positive, net fiscal dividends and intrajurisdictional spillovers. Thus, past employment requirements may ultimately prompt an unrestrictive community development policy stance.

Pittsburgh, California

Pittsburgh is a small community located in the isolated eastern periphery of Contra Costa County, near the Sacramento delta. Prior to World War II, Pittsburgh was an agricultural hamlet whose major economic activities were fishing and row cropping. During World War II and the Korean War, operations at nearby Camp Stone expanded greatly, transforming Pittsburgh into a service center for the military. In the postwar period, U.S. Steel, Dow Chemical, DuPont, and Crown Zellerbach Corporations located plants in the area. In addition to workers required by Camp Stone, the labor requirements of these industrial firms led to the development of Pittsburgh as a low-income, ethnic, blue-collar worker community (57 percent nonwhite), largely Italian, black and Hispanic. Heavy industry in the area employed 42 percent of local workers in 1965; the average household income in 1976 was $12,830, 29 percent below regional norms.

Throughout Pittsburgh's expansion, the city erected few barriers to continued low-cost housing development. As late as 1976, the typical home was extremely small (1300 sq. ft.) and sold for $35,000, 39 percent lower than regional average. Army activity in the area declined during the 1960s and the city faced severe unemployment problems, with unemployment rates at times reaching 30 percent. In light of its spatial isolation, the city could only look toward expansion of industrial activity as a source of jobs for local residents. The spirit of boosterism prevailed, low-cost, blue-collar and housing development was encouraged as an attraction to prospective industrial locators.

This development pattern posed problems, however, in that heavy industry plants like U.S. Steel and Dow Chemical as well as smaller firms were attracted to Pittsburgh, but located outside city boundaries, and were never annexed. Local industry felt that property tax revenues from their Pittsburgh-based employees should satisfy city fathers and allow the plants the right to be free riders with regard to city services and environment. Despite some friction over this issue, the importance of heavy industrial employment to the community was undeniable and rendered the city little leverage to attribute some of the industry-imposed, local public-service costs. Thus, local urban services were financed for the most part out of residential property taxes and commercial revenues. As late as 1976, for example, direct per capita public expenditures in Pittsburgh were only $107, 26 percent lower than regional averages, while tax rates were slightly above average. The majority of the city's budget, including its substantial federal subventions, is allocated to capital
improvements; despite low incomes and a significant service-dependent population, there are virtually no city-funded human service supports.

Since the mid-1970s, however, the dynamics of migration to Pittsburgh have changed. Newcomers to town are no longer attracted by factory jobs. Instead, white-collar workers are moving in to take advantage of the largest source of cheap single-family housing in a county where rapidly escalating housing prices have locked out first-time home-buyers and moderate-income families anxious to suburbanize. Land-use policies, however, are still exceptionally unrestricted: the city council favors growth; less than 1 percent of developable land is zoned for low-density housing construction; and development fees for a standard single-family home are a mere $835. The explanation appears to be that newcomers to Pittsburgh, while of moderate income, are still economically better-off than existing residents. They thus supply more sales tax revenues and positive neighborhood effects. Furthermore, the new housing they occupy is small and cheap by regional standards but still of higher quality and price than the existing stock. Hence, this development adds to the community's troubled economic base, generating positive fiscal impacts for a city which, for all practical purposes, has been a suburban ghetto.

3.3 Housing as a Loss-Leader

Cities in difficult fiscal straits may encourage residential growth as a "loss-leader," to spur commercial expansion and reap the sales tax

8 Ibid.
revenues which accompany it. Often, such cities are moderate-income bedroom communities whose growth has resulted from excess housing demand in nearby, more established jurisdictions. Since the enactment of Proposition 13, the importance of commercial development to these communities has increased.

Milpitas, California

Milpitas is a lower-middle class community of approximately 35,000 in northern Santa Clara County. Like Pittsburgh, the development of Milpitas was influenced by industrial siting decisions—the General Motors Assembly Plant in Fremont and the Ford Plant in Milpitas. Unlike Pittsburgh, however, Milpitas has historically been a "residual" jurisdiction, with population being relatively slow to flow into the city and only increasing during the regional population boom of the latter 1960s. Due to its residual nature, Milpitas has experienced slow commercial growth, the population's service needs being met by older established centers in neighboring jurisdictions.

Historically, most workers in town have been blue collar; 35 percent of the population is nonwhite and incomes are 14 percent below the regional average. In line with this socioeconomic profile, housing in Milpitas is small (1346 sq. ft.), and relatively low-priced ($40,000). The city imposes moderate development fees—$1604 in 1976; has zoned its flat acres for a mean density of more than six units per acre, and favors residential and commercial growth.
The rationale for this development stance, however, has recently changed significantly. After an initial period of boosterism and lack of attention to the cost/revenue impacts of development, Milpitas found itself in a situation where residents faced the highest school tax rate in the state, but school quality was exceptionally low. A cost/revenue analysis of the problem revealed that new housing development was not "paying its own way," and tax revenues from both existing and new residents were being channeled into school infrastructure expansions and other urban service extensions necessitated by new growth. After a brief shift in council ideology toward a no-growth position (there was actually a construction moratorium in 1970-71), the city adopted a new pro-growth strategy. Citing the lack of commercial development as a fiscal drawback, due to the "escape" of potential sales tax revenues to neighboring areas, Milpitas now seeks to expand its commercial-industrial base in two ways. First, the city has committed itself to "the continued development and expansion of the City's economic tax base and, as such, intends to provide... a development service designed to facilitate the development process; provide... all necessary public capital improvements to support the expansion and development of the community's tax base, (and) provide assistance and encouragement in the formation of assessment districts to help lessen the burden on development" (Resolution No. 2925, August, 1977).

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9 Information on Milpitas is derived from 1979 interviews with James Connelly, Deputy City Manager for Community Development.

10 For example, Chapell, Citation, and Arcadia Homes
This program has had payoffs, as witnessed by a minor influx of light industry, particularly wholesaling and other warehousing activities, and some new commercial development.

Second, given neighboring commercial competition, a larger population base is desired to surpass commercial thresholds in Milpitas and transform the city into a commercial center capable not only of retaining sales tax revenues generated by local consumption, but also of capturing revenues from external demand. Thus, residential development, particularly single-family construction which is of higher quality than the existing stock, is encouraged as a loss-leader, to generate commercial growth and sales tax revenue. In the face of the exploding demand for housing characteristic of the latter seventies, the large housing developers operating in the Milpitas area have been able to successfully market high-density, single-family dwelling units which aid Milpitas in its quest for positive fiscal returns and improved urban service quality. And Proposition 13, by capping residential and industrial property tax revenues, is increasing the city’s dependence on sales tax funding. Thus, more than ever, city leaders view housing as a loss-leader, an imperative to the expansion of their commercial base.

3.4 Defensive Community Land-Use Policy

A restrictive growth stance may be adopted to protect the fiscal base and environmental quality of an individual jurisdiction from spill-over effects of local development policies enacted in neighboring cities. In segments of metropolitan areas which form a unified (or nonsegmented) housing market, restrictive policies implemented by one jurisdiction may
direct population influx to other localities within the submarket, where substitutable housing can be more readily procured. In the face of rapid immigration exacerbated by exclusionary neighbors, communities which previously encouraged growth and even low-moderate income housing development have sought refuge in growth-management plans and moratoria. In the wake of Proposition 13 and continued high rates of immigration and household formation in the Bay Area, interjurisdictional spillover effects of local government development policy are touching off such "defensive" local action more frequently.

Rohnert Park, California

A classic case of interjurisdictional spillovers and defensive policy-making is Rohnert Park, located directly north of Petaluma in Sonoma County. The original concept behind the development of Rohnert Park was the "affordable town," designed for young families and upwardly mobile working class households moving from central city areas.11 Consistent with these objectives, housing construction in the city is primarily small (less than 1500 sq. ft.), inexpensively built single and multifamily homes. In 1976 the average sales price of a home was $45,800, as compared to the regional average of $57,000, and new homes could still be purchased for under $40,000. [Similarly, average Rohnert Park resident incomes are low-to-moderate, averaging 16 percent below regional

11 Information on Rohnert Park is derived from 1979 interviews with Paul Skanchy, Planning Director of the City of Rohnert Park.]
Since the town's incorporation in 1962, the city council has maintained a pro-growth attitude, while supporting an orderly development process emphasizing contiguous urbanization, no annexation or service extensions beyond city limits, and a schedule of development fees and exactions designed to make new development "pay its own."

According to local planners, as well as the recent study by Schwartz et al. (1979), Rohnert Park and Petaluma are part of the same south Sonoma County housing market. Bay Area commuters comprise between 30 and 40 percent of the population in both localities; and housing prices, household incomes, and rates of immigration were, through the sixties and early seventies, quite similar. Petaluma, however, adopted its now-famous growth-management plan (the "Petaluma Plan") in 1972. This plan drastically reduced development opportunities in Petaluma, prompting a deflection of suburbanizing population and housing demand to Rohnert Park and nearby Cotati, as well as other relatively low-cost zones of the Bay Area. Pressures on public-service systems in Rohnert Park increased markedly, leading first to the adoption of a "bedroom fee" for new homes to provide park improvements, and then a "school impact fee" to finance school construction and purchase of portable classrooms. Finally, in 1977, Rohnert Park implemented a growth-management plan which restricted new residential development to 650 units per year. While considerably less stringent than the "Petaluma Plan," Rohnert Park's policy does specify an optimum town size and reduces the annual supply of residential lots for tract development in relation to previous trends.

Resolution No. 77-10, "Resolution Concerning Growth of the City of Rohnert Park and Enacting a Program for Coping with It," reveals the
defensive rationale for the new policy. The resolution states that Rohnert Park is one of California's fastest growing cities under 50,000 population, and that "in the last few years Rohnert Park has experienced a considerable amount of residential development bringing with it the pressure for additional public facilities, including schools, parks, utility systems . . . much of the pressure for residential development in Rohnert Park has been caused by restrictive residential development policies in force in Marin County and the City of Petaluma to the south." The resolution continues with an indictment of current land-use planning practices and growth-management plans: "Land-use planning . . . is a complicated game between localities, each often trying to get the other to provide for the undesired human being searching for a place to live . . . state-wide planning might be the answer, to prevent parochial decisions by towns and counties without any concern as to what effect their decisions and actions have on neighboring towns and counties . . . a danger in adopting growth limitation policies is the possibility and probability of such policies becoming contagious." Consequently, given the problems induced by rapid growth in general and intercommunity growth spillovers in particular, the Council resolved to adopt a formal growth-management plan.

3.5 Intertemporal Spillovers of Local Government Development Policy

Localities may be constrained to develop the community housing stock rates consistent with policy imposed in previous periods and, thus, maintain a restrictive growth stance. In some Bay Area jurisdictions, no-growth ideologies of residents and city councils during the late 1960s and
early 1970s circumscribed the development options of later local decision-makers and residents. The mechanism providing for such intertemporal policy spillovers is frequently the structure of arrangements for environmental management concluded between the state and local governments.

Livermore, California

Livermore is a bedroom community of approximately 50,000 residents, situated in eastern Alameda County's San Ramon Valley. As of 1976, the population of Livermore was middle income ($17,582), and the city's small, single-family homes moderately priced ($44,000). The city has had a history of local public finance problems; the employment base consists primarily of the Lawrence Livermore Laboratory, a federally funded national defense research installation which employs approximately 8000 workers but is not located within city limits and, in any event, is tax exempt. Commercial activities have developed slowly, leaving Livermore tax-base poor. Property tax rates prior to Proposition 13 were slightly above regional averages, and in the late sixties and early seventies as Livermore experienced rapid residential growth, the school system failed to expand its capital facilities forcing the school-going population to go onto double sessions.\(^\text{12}\)

\(^{12}\)Information on Livermore is derived from interviews with Ed Schilling, Assistant City Manager; Russ McCubbin, formerly with Livermore's Housing Authority; and Howard Neece, Livermore City Planner.
The strained school system as well as sewage disposal problems prompted the implementation of high development fees designed to impose the marginal costs of new development on incoming residents ($4294 in 1976). Moreover, the pace of growth generated a backlash against development in general and was given ideological support and legitimacy by the nation wide environmental movement. The result was a 1972 local ballot initiative, dubbed SAVE (Save All Valley Environments), which expressed residents' desires to limit growth in order to: (1) maintain environmental quality (particularly air quality which is a mounting problem in the San Ramon Valley); (2) improve the lagging school system; and (3) prevent sprawl and maintain the "small town" character of Livermore.

These environmental and social goals were translated into a Growth Management Plan implemented by the strongly no-growth city council. The plan featured planning standards designed to prevent service system overload from new development, and a 2 percent limit on housing unit construction. During 1975-78, this plan was not only adhered to, but the council further restricted residential growth to approximately fifty units per year, in contrast to a maximum allowable limit of 300 to 350 units. Moreover, development was restricted to "lots on record," requiring only sewer hookup and no capital improvements. A point system feature of the Plan rewarded the most high-priced projects, adding to the exclusionary effect of the city's development ceiling.

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13 The legality of the Plan was challenged in the State Supreme Court, but was upheld.
During this highly restrictive period, subregional sewerage capacity expansion plans were drawn up according to the Federal Water Quality Act, Section 201. In coordination with the Environmental Protection Agency, the state Water Quality Control Board, and the regional council of governments (ABAG), cities developed estimates of future sewerage capacity requirements, based on projected population growth rates.\textsuperscript{14} This process allowed Livermore to further its nongrowth preferences and insure limited growth via sewer capacity constraints. Although the city had almost exhausted the five-million gallons per day capacity of the local treatment facility, it requested a one-time only expansion grant under 201 for one-million gallons additional capacity, with the understanding that further capacity would have to be funded by the city itself. Furthermore, the council limited Livermore's share of the subregional "interceptor" line to 6.2 million gallons per day, although the city's size and previous growth history warranted a somewhat larger allocation.\textsuperscript{15} These two decisions effectively concretized the city council's vision of Livermore's future.

The city council elections of 1978 saw a significant shift in council goals. The current membership favors growth representing a compromise stand between factions which can be characterized by desires for "growth

\textsuperscript{14}Development of these projections, although partially a technical problem, is primarily a political process by which cities express their development intentions.

\textsuperscript{15}This line transports treated effluents to the Bay.
with quality." This council has revised the growth-management plan to reward the infill and low-income housing projects, initiated the Development of Section 8 housing unit construction, and has authorized the maximum allowable units per year (350) since 1978. Their desire for residential growth has been spurred in part by Proposition 13 and their need to expand their commercial base. Growth, however, is limited by the earlier council's no-growth ideology and its expression in sewage capacity constraints enforced by EPA, the State of California, and the Regional Water Quality Control Board. Thus, the effects of past policy continue to be felt despite changes in political mood and context of development in Livermore.

4. Conclusions

Several conclusions can be drawn from our analysis of local development policy. The regression study, by using a variety of variables indicative of development stance, goes beyond earlier studies in capturing the impact of both formal and informal land-use regulations on housing prices. It thus provides further documentation of the influence of local land-use controls on residential property values.

This finding does not, however, elucidate the bases for local development policy, nor does it alone support any one of the competing theoretical rubrics typically employed to explain adoption of land-use controls. Nevertheless, the study of restrictive and unrestricted community profiles reveals strong contrasts in socioeconomic structure between these city types,
questioning the relevancy of some standard explanations, such as service adequacy or environmental preservation, as "first level of appearances" attempts at explanation. Moreover, by underscoring the correlations between land development policy and socioeconomic class, these data support both behavioral arguments and structuralist interpretations of development policy as a means to the accumulation of private capital, and the maintenance of class segregation in fragmented metropolitan regions.

However, our case studies of Bay Area suburban cities indicate that community development policy may be constrained or shaped in either restrictive or unrestrictive directions by other factors. Existing paradigms are thus inadequate, lacking sufficient complexity to effectively characterize development policy. A development policy stance may derive from the historical conditions of urbanization and the configuration of the local economic base, from development policies of neighboring jurisdictions, or from prior community policies. This indicates that local governments have multiple, diverse, and dynamic bases for their land development behavior. The failure to address these factors serves to obscure an understanding of land-use policy determinants, obfuscating as well important regulatory impacts.
Bibliography


Dear, M., and Clark, G. "Dimensions of Local State Autonomy", McMaster University, Department of Geography, Mimeo, 1980.


Appendix A

Cities in the San Francisco Bay Area Sample

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<th>County</th>
<th>Cities</th>
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<tr>
<td>Alameda County</td>
<td>Fremont, Hayward, Livermore, Newark, Pleasanton, San Leandro, Union City</td>
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<tr>
<td>Contra Costa County</td>
<td>Antioch, Brentwood; Clayton, Concord, El Cerrito, Martinez, Pinole, Pittsburgh, Pleasant Hill, Richmond, San Pablo, Walnut Creek</td>
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<tr>
<td>Santa Clara County</td>
<td>Campbell, Cupertino, Gilroy, Los Altos, Los Gatos, Monte Sereno, Morgan Hill, Santa Clara, Saratoga, Sunnyvale</td>
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<tr>
<td>San Mateo County</td>
<td>Belmont, Burlingame, Daly City, Foster City, Menlo Park, Millbrae, Mountain View, Pacifica, Palo Alto, Redwood City, San Carlos, San Mateo, South San Francisco</td>
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<tr>
<td>Marin County</td>
<td>Corte Madera, Larkspur, Mill Valley, Novato, San Angelino, San Rafael</td>
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<td>Napa County</td>
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## Appendix B

### Data Sources:

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<td>Association of Bay Area Governments and the Bay Area Council, &quot;Economic Profile of the San Francisco Bay Area&quot;, 1979; Metropolitan Transportation Commission, 440 Auto Travel Times</td>
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<tr>
<td>Location</td>
<td>Access to Regional Employment Centers</td>
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