

---

# **SELLING ZONING: DO DENSITY BONUS INCENTIVES FOR MODERATE-COST HOUSING WORK?**

*ROBERT A. JOHNSTON  
SEYMOUR I. SCHWARTZ  
GEOFFREY A. WANDESFORDE-SMITH  
MICHAEL CAPLAN\**

---

## **I. INTRODUCTION**

Many cities in the United States have adopted inclusionary housing programs, which require developers to provide some units at below-market rents or prices. The supporters<sup>1</sup> and critics<sup>2</sup> of these housing

---

\* Robert A. Johnston and Seymour I. Schwartz are associate professor and professor, respectively, in the Division of Environmental Studies at the University of California, Davis. Geoffrey Wandesforde-Smith is associate professor in the Department of Political Science and the Division of Environmental Studies at the University of California, Davis. Michael Caplan was a research assistant in the Division of Environmental Studies and is a planning consultant in San Francisco. The authors thank Daniel Meyerowitz and Tom Infusino for research assistance and Martin Gellen, Paul Sedway, Dan Sperling, Larry Wade, John Loomis, and Warren Jones for valuable comments and suggestions. The help of John Woodbury of Concord and Stephen Burke, Gale Brownell, Phillip Trowbridge, and Sam Watson of Santa Rosa is greatly appreciated. We gratefully acknowledge financial support from the Public Service Research and Dissemination Program at the University of California, Davis, and the California Department of Housing and Community Development. Lastly, we thank George Dutton of Santa Rosa for sharing project cost data.

1. See, e.g., A. MALLACH, INCLUSIONARY HOUSING PROGRAMS: POLICIES AND PRACTICES (1984) (published by Rutgers University Center for Urban Policy Research); Kleven, *Inclusionary Ordinances: Policy and Legal Issues Requiring Private Developers to Build Low Cost Housing*, 21 UCLA L. REV. 1432 (1974).

programs agree that, to pass legal muster, inclusionary programs must not reduce project profits below normal levels.<sup>3</sup> Local governments, then, must decide whether to offer financial incentives that would compensate developers for the reduced value of controlled projects.

In 1979, the California Legislature adopted a statute requiring cities and counties to grant prescribed density bonuses or equivalent financial incentives to projects that provide specified percentages of units affordable to low- or moderate-income households. In effect, local governments now must "sell" zoning density increases to developers who, in return, provide low- or moderate-income housing units at below-market prices and rents.<sup>4</sup>

This Article reviews the housing affordability problem, the California legislation, and previous research findings. The Article outlines

---

2. See, e.g., Ellickson, *The Irony of Inclusionary Zoning*, 54 S. CAL. L. REV. 1167 (1981).

3. See MALLACH, *supra* note 1, at 17-19, 33-36; Kleven, *supra* note 1, at 1524-28; Ellickson, *supra* note 2, at 1213-14.

4. Selling upzonings to the highest cash bidder has been suggested as a way to recoup for the public the unearned increment in property values due to public improvements and urban growth. Clawson, *Why Not Sell Zoning and Rezoning? (Legally, That Is)* 2 CRY CAL. 1, 39 (1967). Under the density bonus program, the extra density is granted to the developer who, in exchange, sells these units at below-market prices. These subsidized units provide an external social good to the local community. The California legislature adopted many other statutes intended to raise residential densities. CAL. GOV'T CODE § 65913.1 (West 1983) requires residential zoning in "appropriate" amounts and densities to meet the housing needs of all economic segments of the community. CAL. GOV'T CODE § 65583 (West 1983) requires that local general plan housing elements "make adequate provision for the existing and projected needs of all economic segments of the community." Planners are required to "consider" the jurisdiction's fair share of regional housing needs in making long-term housing needs assessments. *Id.* Some state policies are more specific and encourage density increases tied to specific housing forms. CAL. GOV'T CODE § 65583 (West 1983), for example, requires that local jurisdictions zone for higher densities to allow for multifamily structures. CAL. GOV'T CODE §§ 65852.1 and 65852.2 (West 1983) require localities to allow small second units on existing occupied single-family parcels. CAL. PUB. RES. CODE § 21085 (West 1983) prohibits the reduction of residential densities pursuant to the California Environmental Quality Act (California's impact reporting law), unless adverse impacts cannot otherwise be mitigated. CAL. GOV'T CODE § 65589.5 (West 1983) requires that if a city or county approves a residential development project at a density lower than allowed by the local zoning or development policies, it must make formal findings that the project would have "specific" adverse effects and that no other methods exist to mitigate those effects. In challenging these findings, the burden of proof rests on the city or county. CAL. GOV'T CODE § 65589.6 (West 1983). For a review of pertinent statutes, see CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT, 101 STEPS TO BETTER HOUSING: THE CALIFORNIA HOUSING PLAN, 1982 (1982).

our methods, presents our results, and recommends program improvements.

### A. *The Housing Affordability Problem*

Nationwide, the percentage of households able to purchase the median-priced new house fell from forty percent in the early 1970s to less than ten percent in 1981.<sup>5</sup> The program that this Article analyzes was adopted in 1979, during this period of decreasing housing affordability.

The situation in California was worse than the problem nationwide. House prices went from eight percent above the national average in 1973 to fifty percent above the national average in 1980.<sup>6</sup> In 1979, average raw land costs in California in areas zoned for single-family houses were the highest in the nation at \$143,000 an acre, compared to a national average of \$45,000.<sup>7</sup>

### B. *Exclusion*

Local government regulatory behavior has adversely affected land prices in many communities. Zoning in the United States has been used from its inception to drive up housing costs and, thus, to exclude ethnic minorities and the poor.<sup>8</sup> Property values and "community character" have been protected with large-lot zoning, floor-area minimums, and prohibitions of apartments.<sup>9</sup>

---

5. See S. SCHWARTZ & R. JOHNSTON, MEASURES FOR INCREASING THE SUPPLY OF MODERATE-COST HOUSING IN CALIFORNIA 3 (1980) (published by the University of California, Davis, Institute of Governmental Affairs).

6. *Id.* at 1; Schwartz & Johnston, *Inclusionary Housing Programs*, 49 J. AM. PLAN. A. 3 (1983).

7. L. KATZ & K. ROSEN, THE EFFECTS OF LAND USE CONTROLS ON HOUSING PRICES 38-39 (University of California, Berkeley, Center for Real Estate and Urban Economics Working Paper No. 80-13, 1980).

8. See R. BABCOCK & F. BOSSelman, EXCLUSIONARY ZONING (1973); J. DELAFONS, LAND-USE CONTROLS IN THE UNITED STATES (2d ed. 1969); HOUSING FOR ALL UNDER LAW: NEW DIRECTIONS IN HOUSING, LAND USE AND PLANNING LAW (R. Fishman ed. 1978); A. DOWNS, OPENING UP THE SUBURBS (1973). See also Euclid v. Ambler Realty Co., 272 U.S. 365 (1926) (zoning ordinance upheld in deference to legislative judgment).

9. See D. LISTOKIN, FAIR SHARE HOUSING ALLOCATION (1976) (published by Rutgers University Center for Urban Policy Research); Babcock & Callies, *Ecology and Housing: Virtues in Conflict*, in MODERNIZING URBAN LAND POLICY 205 (1973); Coke & Liebman, *Political Values and Population Density Controls*, 38 LAND ECON. 347 (1961).

### C. State Housing Policy Alternatives

Four types of legislative policy changes have been suggested to overcome suburban exclusion by lowering land costs and increasing residential densities for new construction. The first approach would have states require cities and counties to provide for a variety of residential densities, including ample multifamily zones.<sup>10</sup> A second and more radical approach would prohibit local governments from having any density limits in residential zones.<sup>11</sup> Neither of these proposals has been adopted.

The third type of policy involves the regulation or construction of housing directly by the state. Examples include New York's housing development agency, which was exempt from local controls; Massachusetts' "anti-snob" zoning act, which allowed developers of low- or moderate-cost housing to appeal local zoning restrictions to a state board; and California's coastal commission, which had permit authority over housing projects in the coastal zone and required below-market-price housing units in many projects.

These three approaches were terminated because of opposition from local governments. California subsequently adopted a fourth and more modest program that applies statewide.

### D. The California Density Bonus Statute

The density bonus statute, adopted in 1979 and subsequently amended, requires cities and counties to grant either a density bonus of twenty-five percent or more or to provide other incentives of equivalent financial value to developers of projects of five or more units if: (1) 10% of the units are to be affordable to households of low income (80% or less of county median income); or (2) 25% of the units are to be affordable to households of moderate income (80% to 120% of county median income); or (3) 50% percent of the units are to be restricted to elderly residents (sixty-two years of age or older). No ongo-

---

10. See Schwartz & Johnston, *supra* note, 6, at 24-25; K. ROSEN, CALIFORNIA HOUSING MARKETS IN THE 1980S: DEMAND, AFFORDABILITY, AND POLICIES 95-97 (1984); D. DOWELL, THE SUBURBAN SQUEEZE (1984); E. LOVELACE & W. WEISMANTEL, DENSITY ZONING: ORGANIC ZONING FOR PLANNED RESIDENTIAL DEVELOPMENT (Urban Land Inst. Tech. Bull. No. 42, 1961).

11. See Davidoff & Davidoff, *Opening the Suburbs: Toward the Inclusionary Land Use Controls*, 22 SYRACUSE L. REV. 509 (1971); Lefcoe, *California's Land Planning Requirements: The Case for Deregulation*, 54 S. CAL. L. REV. 447 (1981).

ing rent or price controls on the affordable units are required.<sup>12</sup> This program is politically appealing because it requires no financial subsidies from local or state governments and allows private developers to act in their own self-interest.

### E. Previous Research

Density bonuses were used in New York City in the 1960s to encourage office developers to provide plazas and other street-level amenities.<sup>13</sup> Beginning in the late 1960s, density bonuses have been used occasionally by local jurisdictions to compensate residential developers for the costs imposed on them by inclusionary housing requirements.<sup>14</sup>

Early bonus programs did not offer sufficient incentives to attract many developers.<sup>15</sup> Montgomery County's mandatory program, which allowed one bonus unit for every two affordable units, resulted in affordable units that constituted five percent of the 25,000 residential units built over several years.<sup>16</sup> Schwartz and Johnston found that a bonus of at least one market unit for each affordable unit generally was needed to generate developer participation.<sup>17</sup> Large projects provide affordable units more efficiently because smaller and lower quality units can be built in separate structures.<sup>18</sup>

Ellickson states that mandatory inclusionary programs without sufficient subsidies will raise the price of the market-rate units in the project, which will reduce demand.<sup>19</sup> Supply will subsequently decline, leading to higher housing prices marketwide that harm all prospective buyers and renters. Ellickson dismissed inclusionary programs by assuming that local governments will not grant density bonuses in good faith. Mallach agrees that, without compensating incentives, inclusionary programs may raise the price of market-rate housing. Nonetheless, he believes that these programs will help moderate- and low-income households by shortening the chain of moves as "trickle down" oper-

---

12. CAL. GOV'T CODE § 65915(f) (West 1983).

13. Comment, *Bonus or Incentive Zoning: Legal Implications*, 21 SYRACUSE L. REV. 895 (1970).

14. Erber & Prior, *The Trend in Housing Density Bonuses*, 40 PLAN. 14 (1974).

15. *Id.*

16. Fox & Davis, *Density Bonus Zoning to Provide Low and Moderate Cost Housing*, 3 HASTINGS CONST. L.Q. 1015, 1046-53 (1976).

17. See Schwartz & Johnston, *supra* note 6, at 17, 19.

18. See Kleven, *supra* note 1, at 1467.

19. See Ellickson, *supra* note 2, at 1203.

ates in the lower priced housing stock.<sup>20</sup> Mallach stresses the need to subsidize projects with density bonuses, mortgage revenue bonds, and other incentives so that the market-rate units in these projects will not experience price or rent increases.

Some analysts worry that the bonuses may be set too high. Because land prices are often determined by the number of units subsequently approved in the project, the prospect of density bonuses could increase land prices. To avoid this result, the planning agencies must calculate potential project profits and control bonus incentives to avoid excess profits.<sup>21</sup> Also, applying density bonuses to only a fraction of the number of projects could help curtail the rise of land prices by preventing a general anticipation effect.<sup>22</sup>

Two reviews of inclusionary programs recommend that the rents and prices of the designated units be controlled for up to sixty years through deed restrictions to maximize program benefits.<sup>23</sup>

## II. METHODS

Based on the issues raised by previous investigators and by the California statute itself, we identified four research questions that are important to understanding the program's operation: (1) How did the level of incentives affect project profits? (2) How did county median income (which determines allowable rent and price levels) and local land prices affect participation by developers? (3) Do local agencies vary incentives and income requirements to prevent project rates-of-return from rising substantially above normal levels? and (4) Do local governments impose ongoing rent and price controls to sustain program benefits?

To address these four questions, we analyzed three primary data sets: a statewide survey of cities and counties, two case studies of innovative city programs, and a financial analysis of hypothetical projects.

We surveyed all California cities and counties in 1983 by mail and asked them about their use of the program. Of the 493 jurisdictions, 248 responded (50.2%), with cities and counties of different population levels fairly well represented. In a follow-up survey in 1984, we conducted lengthy telephone interviews with planners and housing agency

---

20. See A. MALLACH, *supra* note 1, at 43.

21. See Kleven, *supra* note 1, at 1478-80.

22. See A. MALLACH, *supra* note 1, at 116.

23. *Id.* at 20; Schwartz & Johnston, *supra* note 6, at 18.

personnel in the seventy-four cities and counties with the most ambitious affordable housing programs.

Because of their creative use of density bonuses, we selected Santa Rosa and Concord, both in northern California, for case studies. In early 1985, we interviewed city staff personnel, gathered background data, reviewed project files, and held discussions with developers who were experienced with the cities' programs. We selected Santa Rosa, a medium-sized city with moderately low land prices, because its density bonus program employed high bonuses (up to 150%). We chose Concord because it was a medium-sized city with fairly high land prices and had an innovative program allowing bonuses of up to fifty percent. These two detailed studies gave us a closer look at the financial effects of bonuses and other incentives as well as the acceptability of rent and price controls to developers.

Using data from the case studies, we performed a financial analysis of typical density bonus projects, assuming that the affordable units rent at the low-income rent level. We analyzed rental projects because we believe that they will provide more low- and moderate-income units than ownership housing. We used 1985 project data from Santa Rosa and 1984 data from Concord.

### III. RESULTS

#### A. *Statewide Survey*

Of the respondents to our statewide survey, fifty-five percent had a program that offered a density bonus or other equivalent incentives. Eighteen percent of respondents offered only the bonus incentive, twelve percent used other incentives of equivalent financial value, and twenty-five percent used both.<sup>24</sup> The high rate of use of both bonus and other incentives together indicates that bonuses, by themselves, may not be financially adequate for developers, as previous research suggests.<sup>25</sup> The moderate participation rate (fifty-five percent) also

---

24. A survey conducted for the state about one year after our survey confirmed our findings. This subsequent survey, which excluded small cities, found that 49% of the jurisdictions had adopted density bonus programs. Of all jurisdictions, 25% offered bonuses in conjunction with other incentives. The jurisdictions most frequently offered the following incentives in addition to the standard bonuses (in order): fast permit review, larger bonuses, and mortgage revenue bond (MRB) financing. Very few jurisdictions offered the statutory bonus alone. See CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT, CALIFORNIA AFFORDABLE HOUSING LEGISLATION v-16 (1984).

25. We assume that when local governments set program incentives above the state

leads us to believe that the program is not profitable in some markets. Moreover, only nineteen percent of respondents had granted density bonuses or other incentives to more than three projects, which indicates a lack of interest by developers in many parts of the state.

Ten jurisdictions had each awarded bonuses to projects totaling more than one thousand bonus and market-rate units. These ten jurisdictions had a wide range of populations, mean household incomes, and raw land prices, so no pattern emerged that could explain the high participation by developers.<sup>26</sup>

We estimated that two to four percent (4,457 to 8,914) of all residential units permitted in the state during 1980-1983 were affordable units under the density bonus program.<sup>27</sup> This is a significant output for the first three years of a voluntary program. A subsequent state survey found that sixty-two percent of the cities and counties with participating developers had ongoing price and rent controls in effect for five to fifty years.<sup>28</sup>

The surveys show that the program has been used by a majority of cities and counties, but only by a few developers in most jurisdictions. The program seems to have been intensively used in communities with a wide range of incomes and reported land prices. We do not know, however, the characteristics of the jurisdictions where the program has not been used. To get a closer look at the relationship between incentives and performance, we undertook the two case studies.

## B. Case Studies

### 1. Santa Rosa

Santa Rosa's housing stock increased 83.7% from 1970 to 1980. In 1980, the median household income was \$18,600 for a family of four

---

levels, they set the incentives at the minimum levels needed to obtain developer participation. In some jurisdictions, developers undoubtedly can obtain larger incentives than they need to make normal profits.

26. Planners reported land prices in the jurisdictions.

27. The total number of units in density bonus projects was reported to be 44,576. Based on earlier research, we estimated that 10-20% of these units were affordable units. See Schwartz & Johnston, *supra* note 6, at 10-13. We extrapolated from our sample to the state based on the percentage (62%) of the state's population in the jurisdictions in our survey.

28. CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT, *supra* note 24, at v-11.

and the median rent was \$292 per month.<sup>29</sup> The rental vacancy rate was 4.3%. The city council adopted an ordinance in late 1980<sup>30</sup> that offered density bonuses (DBs) of as much 150% to developers.<sup>31</sup> More than 2,800 acres of vacant land zoned low- and medium-density residential were targeted for these DB projects. The developer could elect to receive the state program's twenty-five percent bonus *in addition to* the local program bonus. The optional state bonus required affordable units in rental projects. The local bonus options, however, did not require developers to provide any affordable units in rental projects. The city believed that mortgage revenue bond incentives, used in most rental projects at the time, had strong enough restrictions. These restrictions required twenty percent or more low- or moderate-income units, screening of incomes of renters, and rent controls for ten years or more.

For ownership housing, affordable units were required under the local program to be twenty-five percent of *the bonus units* granted to the developer.<sup>32</sup> The city housing authority screened purchasers, and the price controls on the affordable purchase units ran in perpetuity (sixty years, in effect). The city administered the resale transactions during this time.

In addition to mortgage revenue bonds, granted to all projects with fifty units or more and to most smaller projects, some projects were given land write-downs through federal block grant funds.

As of mid-1984, about 4,000 total units had been approved in 54 density bonus projects. About 2,100 were rental units. Of the 1,900 ownership units, 273 were resale-controlled for moderate-income households (about 15% of the total number of ownership units). The program was used for almost all of the residential projects in 1980-

---

29. Low-income households, defined as those earning 80% or less of the county median income, constitute 40% of Santa Rosa's households.

30. Santa Rosa, Cal., Policy 200-07 (Dec. 23, 1980) and Resolutions 14840, 15205 (Dec. 23, 1980).

31. Information presented in this section is derived from Santa Rosa city documents, including The Housing Element, November 16, 1984 (unpublished document adopted by Santa Rosa, Cal., Resolution No. 17105 (Dec. 18, 1984)); interviews with Gale Brownell and Stephen Burke of the Santa Rosa Housing Authority; G. Brownell, Voluntary Inclusionary Zoning: Santa Rosa's Density Increase Program (1984) (unpublished master's thesis available at the University of San Francisco College of Professional Studies); and from confidential interviews with developers, planning commissioners, and city council members.

32. The state program requires 25% of the original total number of project units to be affordable, a much more stringent requirement.

1984.<sup>33</sup>

The Santa Rosa experience indicates that bonuses higher than the statutory bonuses can encourage widespread participation by developers. The large bonuses amounted to a de facto upzoning. Such large incentives probably increased developer profits and may have led to an increase in land prices, but we have no evidence to verify this theoretical expectation.<sup>34</sup>

## 2. Concord

In Concord, the median household income in 1980 was \$22,130 and the median rent was \$287. The 1980 rental vacancy was 3.4%. Housing units increased by 55% from 1970 to 1980.<sup>35</sup>

In late 1984, Concord adopted a density bonus policy<sup>36</sup> that allowed rental projects to receive density increases of up to fifty percent. Rent levels were generally to be controlled for fifteen years. The city also offered mortgage revenue bond financing and land write-down incentives to both rental and ownership projects.

Ownership projects could receive density increases of up to twenty-five percent. Rather than require long-term resale restrictions to maintain the affordability of the inclusionary ownership units, Concord used a windfall recapture scheme. Through the scheme, the city was to receive the difference in value between the controlled price and the market price. This was done using a second trust deed, due on sale. The money paid to the city accumulated in a special revenue account designated for future use in low-income housing programs.<sup>37</sup>

---

33. The city was considering requiring rent controls and income screening for affordable units in new rental projects in 1985 due to the success of the supply strategy in raising the rental vacancy rate to 12%. Interview with G. Brownell, author of unpublished master's thesis (Sept. 10, 1985).

34. Two local developers and one former city councilperson believed that the higher densities caused greater land cost increases in areas designated for the program than in areas not so designated.

35. Information presented in this section comes from Concord, Cal., General Plan ch. 1.27 (Dec. 17, 1984); city development documents; interviews with John Woodbury, Programs Coordinator with the Concord Housing and Community Development Office; and discussions with local developers.

36. Concord, Cal., General Plan ch. 1.27 (Dec. 17, 1984).

37. A first trust deed for an "affordable" unit was financed at the market interest rate by a private lender. The city held a second trust deed in the amount of the difference between the affordable price and the full market value. Payments on the second trust deed were deferred for two years. Partial payments started in the third year and rose to full payments in the sixth year. The balance of the second mortgage was due on

Only four density bonus projects had been approved by mid-1984, involving 88 of 1,482 total residential units approved from 1982 through 1984.<sup>38</sup> Thus, the Concord program had only limited success in facilitating affordable housing.

These density incentives clearly affected the way planning decisions were made in Concord. After the density bonus policy was adopted, the city was less willing to grant generous and unconditioned upzonings.<sup>39</sup> Affordable rents and sales prices became key factors the city council considered in determining the appropriateness of granting higher densities.

According to the planning director, land prices rose about fifty percent from the end of 1982 to the end of 1984. He believed that these increases were due to the mortgage revenue bond program and to strong housing demand resulting from regional employment growth.<sup>40</sup> Density bonuses probably were not a major contributor to higher land prices, however, because only a fraction of residential projects during 1982-84 were awarded bonuses and landowners did not expect the program to increase in use.

The limited number of projects using the density bonus program indicates that developers did not perceive twenty-five percent to fifty percent bonuses as profitable, even when municipal revenue bonds (MRBs) also were offered. The Concord program reduced upzonings and, therefore, reduced the number of housing units built compared to

---

sale. The interest rate on the second trust deed was about two percentage points below market rates. Part of the logic behind the second trust deed was to help buyers qualify for purchase loans they would ordinarily be unable to receive. Because no payments are made to the city for two years, the lender of the first trust deed does not consider the full debt burden in underwriting the loan. The later, graduated payments on the second mortgage could cause problems, however, for buyers whose incomes do not increase over time as anticipated. The payment schedule is designed to be affordable to households on fixed incomes, assuming they receive cost-of-living increases equal to inflation. Although the city will accumulate housing development funds from its second trust deeds, there are no program guidelines for the use of such funds. Furthermore, nothing legally requires future city councils to use this money for affordable housing.

38. The other program was a straight 25% bonus pursuant to the state law which, due to inadequate affordability definitions, granted no greater affordability than market-rate projects. The state law uses countywide median income; in cities with median incomes below the county's median, the moderate-income units may not be below market in price or rent because of low land costs.

39. One official confidentially told us that permitted densities were lowered prior to the adoption of the density bonus program.

40. Interview with John Woodbury, City of Concord Planner (Mar. 15, 1984).

what probably would have been built without the density bonus program.

### C. *Economic Analysis of Hypothetical Projects*

To examine the effects of different levels of incentives, land prices, and income requirements on profits, we performed rate-of-return (IRR) calculations for projects with density bonus and MRB incentives, for two levels of land cost, and for two rates of annual rent increase. Table 1 displays the IRR results for four project types. The baseline project has 160 market-rate units. The state-mandated density bonus case adds 16 low-income units (10%) to the baseline case and 25% more total units are built. We used low-income units instead of moderate-income units because, in both case-study cities, demand for moderate-income rental units was met by market supply. For comparison, we examine an MRB project with 160 units, of which 20% (32) are low income, as required by the federal MRB regulations. The 10% DB/MRB case has 40 low-income units out of a total of 200 (the 10% low-income units required by the bonus program are counted as part of the 20% required by the MRB program).

Because our data will not apply absolutely to many actual situations, the relative differences among IRRs are more important than their absolute levels. Table 1 shows how the two most frequently used incentives affect profit. The state density bonus program adds one to two percentage points to the baseline project's IRR for both assumed rates of rent increase and for both land price cases. This is a modest but positive incentive. The IRR increase occurs because there is no extra land cost for the bonus units and because of the economies of scale in the construction of the larger project.<sup>41</sup> MRB financing adds two to three percentage points to the IRR of the baseline project. This helps account for the popularity of MRBs. Another advantage of MRBs is that the developer does not have to redesign the project for more units. The best return is from the DB/MRB project, with an IRR four to five percentage points higher than that of the baseline project.

Table 1 shows that the state-mandated density bonus program does not increase the overall IRR significantly. A supplementary calculation, however, shows that the IRR on the extra investment for the sixteen bonus units is considerably higher than the IRR on the whole

---

41. Per-unit costs for *all* units are reduced four to five percent. Telephone interview with George Dutton, Developer in Santa Rosa (Oct. 17 and Nov. 1, 1985).

TABLE 1

The effect of density bonus and mortgage revenue bond incentives on project internal rate-of-return

Yearly Rate of Rent Increase:	5%		7%	
	IRR %	Diff. Above Baseline	IRR %	Diff. Above Baseline
<b>Moderate-Low Cost City:</b>				
1. Baseline (160/0; 13%)*	22.5	—	26.4	—
2. BD (184/16; 13%)	23.9	1.4	27.8	1.4
3. MRB (123/32; 10%)	25.6	3.1	29.2	2.8
4. DB/MRB (160/40; 10%)	27.3	4.8	30.8	4.4
<b>Moderate-High-Cost City:</b>				
1. Baseline (160/0; 13%)	23.7	—	27.6	—
2. DB (184/16; 13%)	25.5	1.8	29.3	1.7
3. MRB (128/32; 10%)	26.2	2.5	29.7	2.1
4. DB/MRB (160/40; 10%)	28.4	4.7	31.9	4.3

\* Numbers in parentheses are market-rate units/affordable units and loan interest rate, respectively.

NOTE: 30-year, fixed payment mortgage, vacancy factor of 5%, based on sale at end of year 10. O&M costs are 20% of rent revenue. Property tax is 1.1% of capital value (reassessed annually). Straight-line, 15-year depreciation. Rate of increase of capital value is the same as rate of increase in rents. Federal plus state income tax rate is 50%. Real estate commission at scale is 6%. Capital gains tax rate (at sale) is 20%. Discount rate is 12% (nominal rate). Construction cost per unit in baseline and MRB-only projects is \$37,300; construction cost for additional units, above the baseline, is assumed to be \$29,800 per unit, due to economies of scale. In the four moderately low land-price cases, the market rent in year 1 is \$530/month (averaged for a mix of 1- and 3-bedroom units). The low-income rent is 14% lower, or \$455/month. The land cost is \$1.2 million. In the four moderately high land-price cases, the market rent (in year 1) is \$634/month and the low-income rent is 26% less, or \$472/month. The land cost is \$2.2 million.

density bonus project.<sup>42</sup> The marginal return is thirty-two to thirty-six percent, making the bonus units an excellent investment. The same advantage accrues to the DB/MRB project.

These IRR projections assume that land prices did not increase due to the density bonus and MRB programs. Hence, these results repre-

42. We performed separate IRR calculations for the additional investment for the DB projects. In the DB projects, the net present value is higher, but so is the down payment. Depending on the jurisdiction's permit procedures, the developer may need a higher IRR to cover the costs of delay and of redesigning extra units and modifying layouts.

sent medium-term situations and assume that the incentive programs are applied to only a fraction of projects that are not identified in advance. Under these conditions, land prices are not likely to increase in anticipation of higher project profits. Where either density bonus or MRB programs are applied to a high percentage of projects, however, and profits rise as shown in our calculations, land prices should rise until project rates of return fall to normal levels. Our financial analysis and the Santa Rosa case study confirm Kleven's assertion that incentives could be excessive so as to create above-normal profits in the short term.<sup>43</sup>

#### IV. FINDINGS AND DISCUSSION

##### A. *Effect of Incentive Level on Project Profits*

The statutory bonus may be too low to gain the participation of a sizable fraction of jurisdictions, as indicated by the moderate participation rate found in our statewide survey. Half of the participating local governments augmented the bonus program with MRBs and other incentives. This indicates that the state bonus is probably too low in many jurisdictions.

How do we reconcile this finding with the results of the economic model, which show a high marginal IRR for projects using density bonuses exclusively? Although the rate of return on the bonus units in the density bonus project is higher than the rate of return on the baseline project, it may not be large enough to entice developers to take on the added risk and trouble inherent in building the affordable units. The added costs include delay and redesign of the project. The risks include possible delays in selling the larger number of units and a potential reduction in the prices of the market units because of the higher density. Another possible cost is reduced rents or sale prices of market-rate units near the affordable ones.<sup>44</sup> Screening and layout can reduce or eliminate this problem, except in small projects.<sup>45</sup> For these reasons, developers may wish to receive other incentives instead of the density bonus.

---

43. See Kleven, *supra* note 1, at 1445 (short-term "windfall" arises from purchase of units at price lower than market level, as required by law, and immediate resale of units at market price); *see supra* text accompanying note 21.

44. CALIFORNIA BUILDING INDUSTRY ASSOCIATION, THE FEASIBILITY OF THE DENSITY BONUS IN RELATION TO INCLUSIONARY HOUSING PROGRAMS (1980).

45. *See* S. SCHWARTZ & R. JOHNSTON, *supra* note 6, at 15, 17-18.

Our findings corroborate previous research concluding that developers participate when bonuses are high or when other incentives are also offered. Many cities and counties have offered the program with incentives higher than those required by law, and developers have used the program significantly in its early years. These statistics indicate that Ellickson may not be correct in dismissing local incentives as a way of making inclusionary housing programs work without reducing the supply of new units.<sup>46</sup> The state should monitor the performance of these programs and, if the participation rate for local governments does not rise, the law should be modified to require local governments to increase the bonus where necessary.

#### *B. Effect of County Median Income and Local Land Prices on Developer Participation*

Our statewide survey showed that the highest use of the program occurred in jurisdictions with both high and low reported land values located in counties with both high and low incomes.<sup>47</sup>

Changes in density bonus project returns are not sensitive to land prices in the short run because no extra land is required. Contrary to intuition, we believe that it may be profitable to build density bonus projects in communities with high land prices when the communities are within high- and average-income counties. This is true because land costs for bonus units are zero, construction costs are roughly the same everywhere, and high or average county median income allows for profitable rent and price levels.

#### *C. Agencies' Use of Varied Incentives and Income Requirements to Prevent Abnormally High Profits*

Santa Rosa attempted to design incentives and requirements to keep profits from rising in for-sale projects. The city granted modest incentives to a significant number of for-sale housing units, all of which came under initial price controls. The city did not, however, do this for rental projects, where its motive was to increase supply rapidly. Very high density bonuses (150-175%) were granted to rental projects, most of which also received MRB financing and came under ten-year

---

46. See Ellickson, *supra* note 2, at 1215-16.

47. A third state survey likewise showed that large numbers of density bonus units had been approved in jurisdictions of widely varying economic characteristics. See CALIFORNIA OFFICE OF PLANNING AND RESEARCH, THE CALIFORNIA PLANNER'S 1986 BOOK OF LISTS 123-25 (1986).

rent controls. The MRB rental requirements did not require any subsidy by the developer in most cases. Almost all rental projects used the program, indicating that profits probably increased.

In contrast, Concord offered fifty percent density bonuses for rental projects with rent controls and twenty-five percent bonuses for for-sale projects with initial price controls. The city staff performed IRR calculations for each project and attempted to vary incentives on an individual basis to keep profits from rising. Not many projects used the program, indicating that Concord was successful in holding profits to normal levels.

It is likely that in some jurisdictions developers can build moderate-income units without subsidizing them, thereby increasing profits from the density bonus in the short term. In the long term, landowners will capture any above-normal profits. In Santa Rosa, for example, the 1980 median market rent was 18.8% of the city's median income, the middle of the income range defined as "moderate" (80-120% of median), and so moderate-income units could be built with no subsidy.

Density bonus programs could increase housing affordability, even in these cities and counties where moderate-income units require no subsidy, if the rents of the affordable units could be set at low-income levels. Currently, the state law gives the developer the choice of building units for low-income, moderate-income, or elderly households.<sup>48</sup>

#### *D. Use of Rent and Price Controls*

The state's survey showed that sixty-two percent of participating jurisdictions imposed rent and price controls for five to fifty years even though state law does not require such ongoing controls. The participating cities and counties apparently wished to maintain program benefits for the target populations. We believe that the national MRB program has introduced local governments to rent controls and therefore has increased the use of these measures in the California density bonus program.

Rent and price controls, *if used in a program that is voluntary for developers*, will not reduce developer profits below normal levels and will not reduce the supply of new units.<sup>49</sup> Rent and price controls,

---

48. In Concord, the 1980 median market rent was only 15.4% of median income, and moderate-income units could be built without subsidy. The low participation rate by developers of rental projects must be due to the increased costs and risk of building density bonus projects.

49. Such a program could avoid the problems discussed in Ellickson, *supra* note 2.

moreover, are necessary if the affordable units are to continue providing the intended housing benefits. Local programs that do not administer such controls are merely displacing normal market supply at somewhat higher densities, and are providing windfall benefits to first renters and first buyers.

## V. CONCLUSIONS

Jurisdictions vary considerably in their methods of implementing the state density bonus mandate. Developers use the program in both high-income localities and those with high land values. Many jurisdictions offer greater incentives than those required by the state. Most participating jurisdictions require ongoing rent and price controls to maintain affordability.

The affordability and bonus standards in the state law, however, are not appropriate for all jurisdictions. The statute should be amended to reflect that some communities need incentives that are higher than the statutory bonus. To keep the program units affordable, the state legislature should also require rent and price controls for at least twenty years, pegged to increases in county median rents and housing costs and enforced by deed restrictions. Another problem is that the statute allows developers to build moderate-income units in some jurisdictions with no subsidy to the moderate-income units. The statute should be amended to eliminate the moderate-income option in a jurisdiction when the median market rent falls below a specified percentage of the median household income. Such a provision could increase participation by developers in producing low-income units and increase program benefits.

In its current form, the California law is a qualified success in encouraging the provision of a large number of low- and moderate-income units. We have suggested ways of strengthening the statute. The program of "selling" density increases in exchange for developer-subsidized housing should interest other states and many cities and urban counties. The program may help produce affordable housing without the adverse market effects of jurisdiction-wide rent controls and mandatory inclusionary programs without incentives.

The state should continue to monitor this program through detailed investigations into the questions raised in this Article. Further research should focus on types and levels of incentives, the rents and prices of the affordable units, and market conditions in individual jurisdictions.

