

AN EGALITARIAN'S MARKET: THE ECONOMICS OF INCLUSIONARY ZONING RECLAIMED

Andrew G. Dietderich*

Table of Contents

Introduction.....	25
I. Residential Zoning: Theoretical and Economic Baselines.....	29
A. The Consequences of Local Power	29
B. Is Exclusionary Zoning Efficient?	33
C. Separating Good Zoning from Bad: The Search for a Definition of "Exclusionary"	36
1. Distinguishing by Motive.....	36
2. Distinguishing by Economic Effects.....	37
3. Distinguishing "Normal" Uses	37
4. Not Distinguishing	38
II. "Inclusionary" Zoning: Theoretical Shortcomings of Ellickson's <i>Irony</i>	39
A. Mistaken Assumption: All Inclusionary Reforms Are Not Alike.....	40
B. Mistaken Baseline: There Is No "Free Market" in Housing	42
C. Mistaken Model: Filtering and the Fungible Home.....	43
III. Inclusionary Zoning: The Three Legal Regimes.....	45
A. Regime One: Voluntary Inclusionary Programs ..	47
1. Why Builders Want Density Variances.....	51
a. Arbitrage Profits	51
b. Construction Cost Savings	51
c. More Efficient Use of Productive Resources	52
2. Impact on the Housing Market	53

* Associate, Sullivan & Cromwell, New York City; A.B. Harvard University, 1991; J.D. Harvard University, 1995; law clerk to the Honorable Danny J. Boggs, United States Court of Appeals for the Sixth Circuit, 1995-96. Many thanks to Professors Duncan Kennedy, Louis Kaplow, Reuven Avi-Yonah, and Christine Jolls at Harvard Law School, and Professor William Apgar at the Joint Center for Housing Studies of MIT and Harvard University.

a.	Supply in the Suburbs.....	53
b.	Demand and the Exclusivity Premium....	55
3.	Distributive Effects of Regime One.....	58
a.	Existing Homeowners.....	58
(i)	Loss of Exclusivity Premium.....	58
(ii)	Loss of Cartel Profits.....	59
b.	Buyers of Large Lots.....	61
c.	Builders and Owners of Developable Land.....	61
d.	The Included Poor.....	62
e.	Buyers of Affordable Housing Who Do Not Receive Inclusionary Units.....	64
f.	Public Sector Costs.....	64
4.	Effects of Regime One: Running Summary...	65
B.	Regime Two: Mandatory Set-Asides With Density Bonus.....	65
1.	Impact on the Supply of Housing.....	68
a.	Supply Effect I: Settlement Density.....	69
b.	Supply Effect II: Factor Exit?.....	73
(i)	Costs of Construction.....	75
(ii)	Costs Passed on to Consumers.....	77
(iii)	Supply of Inputs.....	77
c.	Aggregating the Supply Effects.....	78
2.	Winners and Losers Under Regime Two.....	80
a.	Existing Homeowners.....	80
b.	Owners of Undeveloped Land.....	81
c.	Buyers of Non-Inclusionary Units.....	81
d.	Buyers of Inclusionary Units.....	82
e.	Public Administrative Costs.....	83
3.	Effects of Regime Two: Running Summary...	83
C.	Regime Three: Mandatory Set-Asides Without Density Bonuses.....	84
1.	Impacts on Low Income Housing Stock.....	85
a.	A Housing Supply Equation.....	85
b.	Causes and Magnitude of Supply Shift ($\Delta P * \eta S$).....	86
(i)	Developer's Short-Run Revenue (ΔP).....	86
(ii)	Effect of Short-Run Revenue on Supply.....	90
(iii)	Revenue and Regime Three's Goals..	91
c.	Determining the Filter Rate (f).....	91

(i) Causes of Filter Loss.....	92
d. Overall Supply Effects	98
2. Winners and Losers Under Regime Three	84
a. Existing Homeowners	99
b. Owners of Undeveloped Suburban Land .	100
c. Buyers of Non-Inclusionary Units	100
d. Recipients of Inclusionary Units	101
e. Other Low Income Buyers.....	101
f. Public Administrative Costs.....	101
3. Effects of Regime Three: Running Summary .	101
IV. Conclusion	103

Introduction

Residential zoning rules have significant effects on the number and type of homes and the distribution of wealth in America. Zoning rules affect the supply of housing by telling developers where and how they can build. Zoning rules distribute wealth in two ways. They distribute good and bad neighborhoods by setting conditions on the free movement of people. They distribute cash by subsidizing the housing purchases of some groups and taxing the housing purchases of others.

Like any system of rules affecting market activity, zoning rules can be efficient (meaning that no other set of rules would make everybody better off)¹ or inefficient, fair or unfair, consistent with our political values or not. Today in America, a shortage of affordable housing and a growing disparity in the incomes of the rich and the poor can be attributed, in part, to our system of residential zoning.² In many communities, zoning rules create favored enclaves of

1. In law and economics terms, resources are said to be used efficiently when they are employed at their highest value. When economists speak of efficiency, they sometimes refer to "Pareto superiority," a relatively uncontroversial, albeit limited, definition which confines the use of the term to voluntary transactions in which at least one person is made better off and no one else is made worse off. In the real world, however, the requisite conditions for Pareto-superior transactions are seldom satisfied because transactions are often involuntary and often adversely affect third parties. Therefore, economists frequently use a less austere concept of efficiency, known as "wealth maximization" or "Kaldor-Hicks efficiency" when discussing policies or markets. This latter concept of efficiency, sometimes called "potential Pareto superiority," is one in which economic winners could *potentially* compensate economic losers, regardless of whether they actually do so. See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 11-16 (4th ed. 1992).

2. This paper focuses exclusively on the economic effects of zoning. For excellent discussions of zoning and race, see Richard T. Ford, *The Boundaries of Race: Political Geography in Legal Analysis*, 107 HARV. L. REV. 1843 (1994) (describing how political boundaries perpetuate racial division) and DOUGLAS S. MASSEY & NANCY A.

low density homes benefitting from deep purchase-subsidies, separate tax bases and cartel-like control over membership.³ These same rules confine affordable housing to a narrow set of left-over spaces: areas of the central city marked by crime, unemployment, landlord abandonment, physical deterioration, depressed property values, a shrinking tax base, and—paradoxically—high rent.⁴

To the same extent that current zoning rules slow the construction of affordable homes and exacerbate income segregation, zoning reform could speed the former and lessen the latter. One set of proposals is inclusionary zoning: the revision of residential zoning rules to encourage (or sometimes compel) the profitable construction of affordable housing in places where it otherwise would not be built. Law and economics literature has consistently resisted this proposal. Its resistance is based almost entirely on Robert Ellickson's article, *The Irony of "Inclusionary Zoning"*.⁵ According to Ellickson, inclusionary zoning brings a windfall to the few lucky tenants awarded cheap homes. In the long run, however, it stalls

DENTON, *AMERICAN APARTHEID: SEGREGATION AND THE MAKING OF THE UNDER-CLASS* (1993).

3. In fact, exclusionary zoning rules subsidize the construction and purchase of better homes in particular suburban areas. See KENNETH T. JACKSON, *CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES* (1985); MARK I. GELFAND, *A NATION OF CITIES: THE FEDERAL GOVERNMENT AND URBAN AMERICA, 1933-1965* (1975).

4. See James J. Hartnett, Note, *Affordable Housing, Exclusionary Zoning, and American Apartheid: Using Title VIII to Foster Statewide Racial Integration*, 68 N.Y.U. L. REV. 89 (1993) (observing that "a major cause of many of the ills afflicting American ghettos has not received sufficient attention from the media or the public-at-large—the systematic exclusion of low-income and minority people from most suburban communities across the country"); William J. Wilson, *Studying Inner-City Social Dislocations: The Challenge of Public Agenda Research*, 56 AM. SOC. REV. 1, 9-11 (1991) (discussing the adverse impacts on the inner-city labor force of the concentration of poverty in certain urban neighborhoods). The pressure on low-income housing prices has been mitigated in America historically by the sheer abundance of land. However, there are limits to this abundance. One limit is the need for the urban poor (taken as a group) to live near jobs and infrastructure. A second limit is the increasing effort to stem suburban sprawl by restricting settlement patterns on the perimeters of cities. See Edward J. Sullivan, *Oregon Blazes a Trail*, in *STATE AND REGIONAL COMPREHENSIVE PLANNING: IMPLEMENTING NEW METHODS FOR GROWTH MANAGEMENT* 51 (Peter A. Buchsbaum & Larry J. Smith eds., 1993) (describing the growth management plans of Oregon, which have been in place since the 1970s); William K. Stevens, *Disputed Conservation Plan Could Be Model for Nation*, N.Y. TIMES, Feb. 16, 1997, § 1, at 18 (describing recent environmental growth management plan for San Diego). A third limit is the magnitude of suburban sprawl, which results in a zoned scarcity of developable land several miles from the centers of many cities.

5. 54 S. CAL. L. REV. 1167 (1981) [hereinafter *Irony*], also reprinted in *RESOLVING THE HOUSING CRISES: GOVERNMENT POLICY AND THE PUBLIC INTEREST* 135-176 (M. Bruce Johnson ed., 1982).

the housing market, raises prices, decreases supply, and eventually hurts the class of less wealthy people it originally intended to help.⁶ Citations to Ellickson for the proposition that inclusionary zoning rules hurt the poor are legion.⁷

6. See *id.* at 1170 ("The irony of inclusionary zoning is thus that, in the places where it has proven most likely to be adopted, its net effects are apt to be the opposite of the ones advertised.").

7. See, e.g., WILLIAM TUCKER, ZONING, RENT CONTROL AND AFFORDABLE HOUSING 11-14 (1991) (inclusionary zoning leads to housing shortages and homelessness); WILLIAM A. FISCHER, THE ECONOMICS OF ZONING LAWS: A PROPERTY RIGHTS APPROACH TO AMERICAN LAND USE CONTROLS 327-29 (1985) (inclusionary zoning is a tool of rich suburbanites who want to stop growth); Jane E. Larson, *Free Markets Deep in the Heart of Texas*, 84 GEO. L.J. 179, 181 (1995) (inclusionary land use rules slow the construction of affordable housing); Quintin Johnstone, *Government Control of Urban Land Use: A Comparative Major Program Analysis*, 39 N.Y.L. SCH. L. REV. 373 (1994) (inclusionary rules restrict supply of affordable homes); William Merrill & Robert Lincoln, *Linkage, Fees and Fair Share Regulations: Law and Method*, 25 URB. LAW. 223, 280 n.296 (1993) ("low- and moderate- income families benefit adequately from the operation of the market in providing higher income housing"); Lawrence Berger, *Inclusionary Zoning Devices as Takings: The Legacy of the Mt. Laurel Cases*, 70 NEB. L. REV. 186, 187 n.1 (1991) ("the market's allocation of where people live may be the most 'efficient' . . . [and] it probably is the allocation desired by most of our citizenry"); Jane E. Schukoske, *Housing Linkage: Regulating Development Impact on Housing Costs*, 76 IOWA L. REV. 1011, 1018 n.40 & 1024 nn.73-75 (1991) (explaining inclusionary zoning through reference to Ellickson); Carol H. Rose, *Property Rights, Regulatory Regimes and the New Taking Jurisprudence—An Evolutionary Approach*, 57 TENN. L. REV. 577, 588 n.49 (1990) (inclusionary zoning risks increasing the price of affordable housing); Bernard H. Siegan, *Conserving and Developing the Land*, 27 SAN. DIEGO L. REV. 279, 293 n.31 (1990) (inclusionary zoning decreases the supply of housing because developer revenues fall); Philip P. Houle, *Eminent Domain, Police Power, and Business Regulation: Economic Liberty and the Constitution*, 92 W. VA. L. REV. 51, 73 n.76 (1989) (inclusionary zoning has "harmful long-term effects on maintaining an adequate stock of low-income housing"); Matthew L. Spitzer, *Antitrust Federalism and Rational Choice Political Economy: A Critique of Capture Theory*, 61 S. CAL. L. REV. 1293, 1317 n.103 (1988) ("[I]nclusionary zoning produces many of the same effects [as growth controls], but is wrapped in a more palatable ideological ribbon."); Carol M. Rose, *Planning and Dealing: Piecemeal Land Controls as a Problem of Local Legitimacy*, 71 CAL. L. REV. 837, 898 (1983) (inclusionary regulations raise the cost of housing); John J. Costonis, *Presumptive and Per Se Takings: A Decisional Model for Taking Issues*, 58 N.Y.U. L. REV. 465, 489 (1983) (inclusionary zoning causes a decline in supply of affordable housing because builders' revenue falls).

Public policy literature does contain at least a mild dissent. See, e.g., ALAN MALLACH, INCLUSIONARY HOUSING PROGRAMS: POLICIES AND PRACTICES 91 (1984) (developers profit from some inclusionary zoning regimes where, to the extent that a municipality offers concessions, these concessions redirect costs away from the developer). Ellickson's analysis is also rejected by the New Jersey Supreme Court in *Holmdel Builders Assoc. v. Township of Holmdel*, 583 A.2d 277, 294 (N.J. 1990) (inclusionary zoning not analogous to a "tax" despite burden on developer, since beneficial economic consequences may be enough to counteract direct economic losses associated with forced construction of inclusionary units). As seen below, however, even these authors concede too much.

Since the publication of *Irony* in 1981, even proponents of inclusionary zoning have deferred to Ellickson on matters of economics.⁸ Inclusionary zoning has become a proposal for social, rather than economic, reform, supported by normative claims for fairness and racial justice.⁹ This pattern of argument is familiar and disastrous for the would-be reformer. When a proposed reform is attacked by law and economics commentators for departing from theoretical efficiency, the reformer can win an argument by diverting attention away from efficiency and towards another, more important end. However, when a proposed reform is attacked as hurting the very people it intends to help, the standard reply does not work. The legal economist defending the system in such a manner appears as compassionate as the reformer. The reformer, unless he retreats to attacking the assumptions of economics as a discipline, can only refute this stronger type of claim by doing better economics than the economist. In the case of inclusionary zoning, no such refutation has been attempted; and the widespread use of inclusionary zoning remains, for most people who think about it on a theoretical level, an unconvincing idea.

What makes the current situation interesting to me is that Ellickson—and the discipline that has cited him since 1981—appears to be wrong as a matter of contemporary economic theory. Market forces operating under inclusionary zoning rules should create *more* affordable housing than market forces operating under the rules applicable in most American regions now. In fact, a switch to inclusionary zoning rules is likely to expand the aggregate supply of housing available across income strata, while leaving regional housing markets no less (and possibly more) “efficient” than they are today.¹⁰ This Article sets out a surprisingly traditional

8. See Harold A. McDougall, *From Litigation to Legislation in Exclusionary Zoning Law*, 22 HARV. C.R.-C.L. L. REV. 623, 641 n.112 (1987) (the benefits of inclusionary zoning “sometimes flow to moderate-income rather than lower-income people”); Timothy J. Choppin, Note, *Breaking the Exclusionary Land Use Regulation Barrier: Policies to Promote Affordable Housing in the Suburbs*, 82 GEO. L.J. 2039, 2062-63 (1994) (inclusionary programs are “ironic” because they coerce builders into paying for affordable housing).

9. However, economic rhetoric in favor of limited reform may be on the rise thanks to then-U.S. Secretary of Housing and Urban Development Jack Kemp, ex-New Jersey Governor Thomas H. Kean, and the ADVISORY COMMITTEE ON REGULATORY BARRIERS TO AFFORDABLE HOUSING, “NOT IN MY BACK YARD”: REMOVING BARRIERS TO AFFORDABLE HOUSING (1991) [hereinafter “NIMBY” REPORT] (re-scission of exclusionary rules makes the housing market work better).

10. Actually, the efficiency gain and the distributive effect are largely independent. As discussed below, the efficiency gain results from the removal of zoning rules which even economists who have sworn to ignore distributive analysis for the remain-

microeconomic justification for these claims. Part I briefly describes how and why residential communities zone, and outlines some analytic frameworks used to distinguish "legitimate" from "exclusionary" zoning. Part II provides an overdue critique of Elickson's article on inclusionary zoning, and identifies some now-ubiquitous missteps. Part III, the heart of the Article, evaluates the likely economic consequences of three ideal-typical inclusionary zoning regimes. Throughout, economic concepts such as positive and negative externalities, cartel rent, stock capacity, price discrimination, and market segmentation suggest that, notwithstanding the prevailing theoretical view to the contrary, inclusionary zoning has tremendous potential for increasing the aggregate supply of affordable housing and augmenting the buying power of the American poor.

I. Residential Zoning: Theoretical and Economic Baselines

A. The Consequences of Local Power

About ninety-seven percent of incorporated communities zone.¹¹ The power to zone is a grant from the state, and state legislatures can revoke or condition it.¹² The need to protect the environment has caused some state legislatures to restrict local authority,¹³ but concerns about the supply of housing have not.¹⁴ Similarly, courts

der of their professional lives are likely to consider harmful. These rules forbid market transactions to build affordable housing in areas where such construction would be highly profitable to developers and landowners. The distribution of wealth to the poor is somewhat parasitic on this efficiency (and revenue) gain produced by the general retreat to less burdensome restrictions.

11. See CHARLES M. HAAR, *LAND-USE PLANNING* 185 (1977) (some 9,000 cities with a population of more than 5,000 zone).

12. See Joel Kosman, *Toward an Inclusionary Jurisprudence: A Reconceptualization of Zoning*, 43 CATH. U. L. REV. 59, 98 (1993) (early enactment of zoning ordinance is constitutionally legitimate tool to avoid certain conditions); David E. Hess, *Institutionalizing the Revolution: Judicial Reaction to State Land-Use Laws*, 9 URB. LAW. 183 (1977) (no state constitutional problems). *But cf.* Berger, *supra* note 7, at 225 (specific owners have a federal Takings claim in cases where bonuses offered by a city do not fairly compensate losses incurred in the sale of affordable houses).

13. See FRED BOSSELMAN & DAVID CALLIES, *THE QUIET REVOLUTION IN LAND USE CONTROL* (1971); James H. Wickersham, Note, *The Quiet Revolution Continues: The Emerging New Model for State Growth Management Statutes*, 18 HARV. ENVTL. L. REV. 489 (1994).

14. In fact, state land use laws in Oregon and Washington have long required local governments to zone for high-density use according to regional needs. See OR. REV. STAT. §§ 197.005-.860 (1993) (Comprehensive Land Use Planning Coordination); WASH. REV. CODE ANN. § 36.70A.110 (West 1991); Sullivan, *supra* note 4, at 51. Three other states, New Jersey, Florida, and Rhode Island recently passed laws requiring local governments to comply with affordable housing needs. See Note, *State-*

can strike residential zoning rules that are beyond the police power of local government.¹⁵ With a few famous exceptions, however, courts have refused to review rules that restrict the supply of affordable housing.¹⁶ As a result, local authorities today have very broad powers to proscribe residential uses within their jurisdictions.¹⁷

Sponsored Growth Management as a Remedy for Exclusionary Zoning, 108 HARV. L. REV. 1127, 1136-42 (1995) [hereinafter *Growth Management*]. Other states "encourage" localities to follow regional plans, but provide no means to enforce compliance. See OFF. OF POL'Y DEV. AND RES., U.S. DEPT. OF HOUSING AND URB. DEV., REMOVING REGULATORY BARRIERS TO AFFORDABLE HOUSING: HOW STATES AND LOCALITIES ARE MOVING AHEAD 7-14, 19-22, 33-42 (1993) [hereinafter *MOVING AHEAD*].

15. The landmark zoning case is *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926). In *Euclid*, however, the Supreme Court *refused* to strike down a comprehensive zoning plan which banned commercial activities from residential areas. Although the plan effectively deprived the plaintiff landowner of the freedom to use its land for any purpose it might wish, the Court ruled that the zoning ordinance could be a legitimate exercise of municipal police power, provided it was not "clearly arbitrary and unreasonable, having no substantial relation to the public health, safety, morals or general welfare." *Id.* at 395. Subsequent cases have allowed localities the specific prerogative to create exclusive residential districts, consistent with the Supreme Court's acknowledgment, in *Village of Belle Terre v. Boraas*, 416 U.S. 1, 9 (1974), that local government police power can be so ample as to lay out "zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary for people." Thus, the burden on municipalities to justify their zoning ordinances is minimal. See, e.g., *Lakewood, Ohio Congregation of Jehovah's Witnesses, Inc. v. City of Lakewood*, 699 F.2d 303, 308 (6th Cir. 1983) (finding no violation of the Due Process Clause in the creation of exclusive residential districts to control traffic congestion and off-street parking in secluded residential areas); *Bossier City Medical Suite, Inc. v. City of Bossier*, 483 F. Supp. 633, 650 (W.D. La. 1980) (finding a reasonable exercise of municipal zoning authority and no overt discriminatory action in regulating the location of an abortion clinic). But see *Colorado Manufactured Hous. Ass'n v. Board of County Comm'rs*, 946 F. Supp. 1539 (D. Colo. 1996) (invalidating, on preemption grounds, a municipal ordinance which required manufactured housing to comply with local building standards, where such standards conflicted with federal standards set forth in the National Manufactured Housing Construction and Safety Standards Act). Although the local ordinance was not a land use ordinance, per se, the court's ruling has obvious implications with respect to the creation of more affordable housing).

16. See *Growth Management*, *supra* note 14, at 1131-32 (few state courts have struck down local zoning rules; none but New Jersey has provided a decent remedy); Choppin, *supra* note 8, at 2039 n.5 (federal equal protections claims rejected); Patricia E. Salkin & John M. Armentano, *The Fair Housing Act, Zoning and Affordable Housing*, 25 URB. LAW. 893 (1993) (federal statutory claims tough to prove); Warth v. Seldin, 422 U.S. 490, 502-17 (1975) (standing barriers).

17. There are many proposals for reform. See, e.g., "NIMBY" REPORT, *supra* note 9, at 9 (states should condition local zoning power on use of that power to remove regulatory barriers to the construction of affordable housing); John Charles Bonger, *Toward Ending Residential Segregation: A Fair Share Proposal for the Next Reconstruction*, 71 N.C. L. REV. 1573 (1993) (the federal tax code should strip mortgage interest and property tax deductions from homeowners in communities with ex-

Local authorities use these broad powers to serve the interests of their voters.¹⁸ In the suburban municipalities that ring most American cities, self-interest leads communities to restrict high-density land uses and affordable housing. There are many motives. New construction may compete with and decrease the resale value of existing homes. New residents with incomes below the community's average may lower the per capita tax base and therefore increase the tax rate necessary for maintaining a given level of public services. New residents, especially those with children, may require a higher level of services, also increasing the tax rate. The zoning authority may dislike persons of a certain race or class. The zoning authority, itself perfectly open-minded, may think that the community dislikes persons of a certain race or class. Current residents, for their part, may fear crime, drugs, an expansion of the urban ghetto, and a gradual loss of political control. They may also worry about the character, aesthetics, or traditions of their space, or they may simply prefer low density and the quasi-Arcadian style of suburban life.

The economic effects of exclusionary residential zoning rules can be divided into five rough categories. First, the rules increase the average price of housing—new and used—by making suburban construction more expensive.¹⁹ Second, the rules increase the price of multi-family housing relative to single-family housing.²⁰ This

clusionary zoning); Choppin, *supra* note 8, at 2057 & n.5 (federal agencies and judges should enforce existing legal policies); Hartnett, *supra* note 4 (proposing that courts be more receptive to federal Fair Housing Act anti-discrimination suits challenging local zoning rules).

18. See Robert C. Ellickson, *Suburban Growth Controls*, 86 YALE L.J. 385, 389 (1977) [hereinafter *Growth Controls*] ("[S]uburban homeowners (if unconstrained) will behave like a profit-maximizing cartel."); DUANE WINDSOR, *FISCAL ZONING IN SUBURBAN COMMUNITIES* 152-53 (1979) (communities practice "fiscal mercantilism"). But see FISCHER, *supra* note 7, at 71-73 (development interests sometimes influence local authorities to act against the interests of their constituency).

19. "NIMBY" REPORT, *supra* note 9, at 4, found that "[a]n increase of 25 to 30 percent in housing prices attributable to excessive regulation is not uncommon." That number may be extreme. See FISCHER, *supra* note 7, at 239; David E. Dowall, *The Effect of Land Use and Environmental Regulations on Housing Costs*, 8 POL. STUD. J. 277 (1979); STEPHEN R. SEIDEL, *HOUSING COSTS & GOVERNMENT REGULATIONS* 159-86 (1978). On the other hand, few studies reflect the power of the suburban municipality to impose ad hoc requirements on particular development proposals. See *Panel Discussion: Redistribution and Regulation of Housing*, 32 EMORY L.J. 767, 800-01 (1983) (moderated and edited by William A. Fischer).

20. The amount of affordable multi-family housing stock declined from 8.6 million units in 1974 to 6 million units in 1989. *Multifamily Housing Finance and Production: Hearings Before the Subcomm. on Housing and Community Dev. of the House Comm. on Banking, Finance and Urb. Affairs*, 102d Cong., 2d Sess. 36 (1992) (statement of William C. Perkins, Board of Directors, Fed. Housing Fin. Board).

price change results from a subsidy to single-family housing buyers: because the zoning authority forbids competing uses, single-family housing buyers face a more abundant supply than they otherwise might.²¹ This subsidy is paid for by people who buy multi-family housing, profitable sites for which are artificially scarce.²² Third, exclusionary zoning forces people to consume land and improvements they do not want. This forced consumption is inefficient because the recipient could sell the extra land and improvements on the market for more than what they are worth to the recipient personally.²³ Such forced consumption is also inefficient if it stops producers from substituting cheaper factors of production (such as technology and design) for land.²⁴ Fourth, such zoning segregates the tax base into wealthy suburban and poor urban components, creating a greater disparity between property tax rates and the return in public services per tax dollar paid.²⁵ Finally, the rules en-

21. Zoning is only one of many subsidies to wealthy and middle-income suburban home buyers—the beneficiaries of significant, federal redistribution. Neither federal nor state governments tax as income the non-rent that homeowners pay themselves. Nor does the federal government tax most income used to pay interest on mortgage payments, even for second homes. People who sell their homes for a profit can often avoid the capital gains tax, which makes home ownership an artificially good investment during inflationary periods. Government provides mortgage insurance. Federal and state governments pay for highway and road construction out of general tax revenues. Residents of incorporated suburbs do not have to pay taxes to support public services in the central city. See generally Richard F. Muth, *Redistribution of Income Through Regulation in Housing*, 32 EMORY L.J. 691 (1983).

22. The number of multi-family housing starts in 1992 was lower than at any time since the 1950s. *Multifamily Housing Finance and Production*, *supra* note 20, at 35 (the 174,000 multi-family housing starts were only 4,000 more than the 170,000 mobile home starts). The biggest purchaser of high-density land is the federal government in its programs to house the poor. Recognizing the increased costs associated with the zoned shortage of multi-family development sites, HUD fought for and eventually won the right to condition grants of housing assistance to state and local governments on the existence of a satisfactory plan for the reduction of regulatory barriers to affordable housing. (Prior to 1992, HUD was barred by federal law from taking zoning law into account in dispersal decisions.) See "NIMBY" REPORT, *supra* note 9, at 10.

23. Such a result fails the Kaldor-Hicks test for efficiency—the asset would be valued higher if it were in other hands. See POSNER, *supra* note 1, at 13-16 (4th ed. 1992).

24. This is *allocative* inefficiency—the same amount of "housing" could be produced with fewer resources.

25. The long run effects of income segregation may be devastating to the basic infrastructure of poorer neighborhoods. Considerable discussion on this point centers around the arguments set forth in Note, *Equalization of Municipal Services: The Economics of Serrano and Shaw*, 82 YALE L.J. 89 (1972). On the other hand, some differentiation between expenditure levels may allow consumers to choose the level of public services they desire most. See *infra* Part I.B. and accompanying notes (discussing the theories of Charles Tiebout).

courage the concentration of poverty.²⁶ Concentration is economically significant if, as some argue, it creates destructive "feedback" effects such as abandonment cycles,²⁷ landlord milking,²⁸ speculative disinvestment,²⁹ and "red-lining."³⁰

B. Is Exclusionary Zoning Efficient?

An influential theory, attributed to Charles Tiebout, says that all these economic effects are the efficient consequences of bargaining between individuals and local governments.³¹ According to the Tiebout hypothesis, the exclusive character of a neighborhood is a good allocated to the highest bidder. The bid of each potential resident, however, is adjusted by the positive or negative externalities caused by including the person in the community.³² For example, traditional zoning rules will give a parcel to a wealthy resident who will pay \$60,000, rather than several poorer residents who will pay \$100,000, if the inclusion of the poorer residents would cause \$40,001 or more in harm (e.g., lost local character, tax base, or property value). In a perfect world, a community would bargain individually with each potential resident. In the real world, how-

26. See generally ANTHONY DOWNS, *NEW VISIONS FOR METROPOLITAN AMERICAN* (1994).

27. See Keith Aoki, *Race, Space, and Place: The Relation Between Architectural Modernism, Post-Modernism, Urban Planning, and Gentrification*, 20 *FORDHAM URB. L.J.* 699, 797-810 (1993) (describing self-perpetuating cycles of falling expectations).

28. See Duncan Kennedy, *The Effect of the Warranty of Habitability on Low Income Housing: "Milking" and Class Violence*, 15 *FLA. ST. U. L. REV.* 485, 489-97 (1986) (sometimes the rational landlord will "milk" a building rather than maintain it).

29. See Ford, *supra* note 2, at 1849-60 (describing the racial components of investment decisions).

30. See "NIMBY" REPORT, *supra* note 9, at 3-12 to 3-13 (the economic effects of redlining); MASSEY & DENTON, *supra* note 2, at 50-53 (describing redlining's "dynamic" causes).

31. Charles Tiebout, *A Pure Theory of Local Expenditures*, 64 *J. POL. ECON.* 416 (1956). For a more favorable treatment than mine, see generally Bruce Hamilton, *Property Taxes and the Tiebout Hypothesis: Some Empirical Evidence*, in *FISCAL ZONING AND LAND USE CONTROLS* 13 (Edwin Mills & Wallace Oates eds., 1975); FISCHEL, *supra* note 7, at 293-315.

32. The classic definition of "externalities" is by A.C. Pigou (c. 1920): "[O]ne person A, in the course of rendering some service, for which payment is made, to a second person B, incidentally also renders services or disservices to other persons . . . of such a sort that payment cannot be extracted from the benefitted parties or compensation enforced on behalf of the injured parties." See Jacques LeBoeuf, *The Economics of Federalism and the Proper Scope of the Federal Commerce Power*, 31 *SAN DIEGO L. REV.* 555, 567 (1994) (quoting Pigou). Or, in LeBoeuf's own words: "Externalities exist whenever the private costs or benefits of an activity do not correspond to the social costs or benefits." *Id.*

ever, transaction costs prohibit this approach, and the community passes general zoning rules. Absent market failure, the rules remain more or less efficient. If for any reason they do not reflect real benefits and costs, the local zoning authority will change the regime accordingly.

Tiebout developed his theory as a partial answer to the public goods problem associated with provision of government services.³³ In that regard, the theory offers useful insights into how specialization by communities may benefit housing consumers.³⁴ Problems arise, however, when one uses the Tiebout theory to justify local rules about the construction of affordable housing (something Tiebout himself never did). Indeed, a number of factors operate to ensure that a local zoning authority—unless it fails to serve the rational interests of its constituency—will consistently forbid efficient purchases.

The greatest failure of the Tiebout model, which charges new entrants the costs the community incurs on their behalf, is that a large portion of these costs simply do not exist from a regional perspective. For example, if new residents of a community are less wealthy than their predecessors, the tax rate necessary to fund a given amount of public services per community resident increases.³⁵ The increase is especially significant if the new residents as a group require disproportionate public spending (e.g., they have more children in public school). Faced with the need to raise the tax rate or lower public service expenditures per person, a rational community will make such low-income residents (or the developer) carry these costs, or, if the costs are too high (or no effective method exists for extracting payment from the new residents or the developer), exclude such residents altogether. The Tiebout model applauds either response as an efficient bulwark against negative externalities. But, from a regional perspective, none of these externalities exist. Any change in the community's tax base will be offset by an equal and opposite change in another community's tax base. And any increase in the number of children in the community's public schools will be offset by an equal and opposite decrease in school enrollment somewhere else. Zoning rules

33. FISCHEL, *supra* note 7, at 293-94.

34. See *infra* text accompanying notes 103-105.

35. The new residents use an equal amount of services per person but do not make an equal contribution to the tax base. Because municipal expenditures in America are most often funded by property taxes, the relative aspect of "wealth" is the assessed value of the resident's home.

do not create or destroy people, they just change the willingness and ability of people to move around.

The Tiebout model is also marred by other costs that the local zoning authorities charge to the account of new residents and developers. A rational community in which many people would like to live (to the extent other communities that are equally attractive and less restrictively zoned are not available to purchasers), will limit new construction in order to profit from the scarcity of homes. Restricting supply can increase the willingness of buyers of new construction to pay high exaction fees or development fees (essentially a bribe disbursed to existing community members). Equally important, restricting supply can increase the resale value of existing residents' homes. In either case, the resulting price increase to new residents and developers is economic rent in the classic sense of a manufacturer's cartel. The Tiebout model treats any decrease in the cartel rents the community receives as a cost for which the community deserves compensation from the cartel's victims.

There are two additional false costs that may raise entry barriers above an efficient level. First, a community may choose its zoning rules based on arbitrary expectations and irrational fears about potential residents. These worries are not true costs of inclusion if they are based on attitudes that will change once inclusion occurs. Second, a community may favor race-neutral zoning rules because they exclude (in an acceptable manner) certain races. The Tiebout model protects all such discriminatory preferences and makes minority residents who would like to move into a community pay for that community's racism.³⁶

Finally, the Tiebout model fails to include benefits that may result from the transactions that residential zoning rules forbid. Developers and the owners of vacant land in a jurisdiction stand to make a considerable profit from the construction of homes at higher density than the jurisdiction would otherwise allow (if they did not, there would be no need for the zoning rule). These developers and landowners are either nonresidents (with no political voice) or a minority whose interests conflict with those of the politically dominant class. In addition, no one in the local jurisdiction benefits from regional improvements, such as a lower concentration of poverty and less urban overcrowding.

36. Strictly speaking, the "cost" of racial integration is a true externality (unlike the others discussed) in that it does permanently decrease someone's welfare.

C. Separating Good Zoning from Bad: The Search for a Definition of "Exclusionary"

For all of these reasons, commentators agree that some local zoning rules lead to inefficiency and artificially high housing costs. Neither economics nor law and economics, however, has been able to propose a workable definition of exactly which rules are improper—i.e., "exclusionary"—and which are not. Bickering over where to draw the line has hindered the discussion of inclusionary zoning as a viable alternative to existing rules.

1. Distinguishing by Motive

Some critics of zoning, mostly lawyers, try to distinguish legitimate from exclusionary zoning on the basis of the residents' motivations.³⁷ A plan designed to harmonize uses and remove externalities is legitimate and presumably efficient. A plan designed to exclude others on the basis of income is illegitimate and potentially harmful. This approach is problematic. A local jurisdiction will give the same *Euclid* reasons for its rules regardless of its actual motivation.³⁸ Economic analysis of the community might reveal whose interests lie where, but this analysis is difficult in the individual case and provides sketchy evidence of intent. More importantly, as shown below, a program of inclusionary zoning can harness and use many of the illegitimate motivations of local landowners. Bad motives, as much as good ones, can propel a helpful intervention.

37. See, e.g., Salkin & Armentano, *supra* note 16.

38. In *Ambler Realty Co. v. Village of Euclid*, 297 F. 307 (N.D. Ohio 1924), the court invalidated a local zoning ordinance, after finding that it had the effect of classifying and segregating population on the basis of income. The U.S. Supreme Court reversed, thereby validating *de facto* segregation. 272 U.S. 365 (1926). The Court in *Euclid* did suggest, in dicta, that zoning ordinances could be challenged successfully when "concretely applied to particular premises . . . or to particular conditions . . ." *Id.* at 395. The Court's *Euclid* decision, however, still allows local governments to cite to their police powers as justification for the creation of exclusionary zoning rules.

For a particularly egregious example of exclusionary sentiment as reflected in a non-residential zoning debate, see Karen DeWitt, "Cold Shoulder to Churches that Practice Preachings," N.Y. TIMES, Mar. 27 1994, at A1 (D.C. zoning officials seeking to shut down church breakfast program initially asserted a compelling governmental interest in excluding the homeless from a "neighborhood of Government offices and expensive apartments," but later abandoned this argument for socio-economic apartheid). See also *Western Presbyterian Church v. Board of Zoning Adjustment*, 862 F. Supp. 538, 545 (D.D.C. 1994).

2. *Distinguishing by Economic Effects*

Another way to distinguish exclusionary zoning is to look at quantifiable economic effects. At least one commentator proposes land value as a proxy for efficiency.³⁹ If a zoning rule creates benefits in excess of its costs, land values should rise.⁴⁰ This approach is promising, but the cost and benefits of a rule change are not entirely represented in the price of land. Land value does not track the beneficial, long-term effects that arise from the integration of different incomes. Nor does land value in a jurisdiction indicate benefits or costs imposed on persons who live or are shopping for homes elsewhere.

Other studies simply note how zoning rules affect housing starts or mean housing prices.⁴¹ Such studies are useful in quantifying the effect of zoning restrictions, but they do not tell whether a given price or quantity effect is justified by positive externalities. Clearly, once a certain point is reached, more housing starts cannot *always* be good.⁴²

3. *Distinguishing "Normal" Uses*

Another proposal would allow zoning rules as long as they are "normal" to a jurisdiction. This approach, advocated by some conservative commentators,⁴³ has two advantages. First, it relies on existing Takings jurisprudence as a starting point; this allows judges to approach the problem in a familiar manner. Second, judges can decide the question of "normalcy" fairly easily, and without reference to economics. Third, the approach is deferential—consistent with Tiebout's theory that income segregation is efficient because local governments should "specialize,"⁴⁴ and with the Chicago School's assumption that the existing property rules are presumptively the best.⁴⁵

39. See FISCHER, *supra* note 7, at 241-43.

40. *Id.*

41. See generally *supra* note 17.

42. Furthermore, the selection of one measure of economic performance from among many disputed possibilities is essentially arbitrary—and depends more on the economic culture of the arbiter than on any matter of logic. Viewed most skeptically, one who favors price as the indicator of "exclusionary" has already discounted legitimate zoning rules, which can create value. On the other hand, one who favors housing starts ignores qualitative differences between types of housing built.

43. See, e.g., *Growth Controls*, *supra* note 18 (recommending Takings actions when a zoning rule is not "normal" for the jurisdiction).

44. See generally *supra* note 31.

45. See, e.g., POSNER, *supra* note 1, at 23 (observing that current common law is the cumulation of centuries of "inarticulate gropings toward efficiency").

However, if a community's zoning choices are flawed by cartel rent, prejudice, and a community's inability to make or take payments for regional externalities, then it makes little sense to defer to such choices simply because a community consistently uses them to exclude *all* prospective low income residents. Similarly, deference to common law property rules, developed by impartial judges, is a poor defense of laws made by a local participatory polity.⁴⁶ If these two distinctions are not reason enough, the normalcy definition of "exclusionary" can also be rejected simply because it cannot result in meaningful reform. Communities that are already exclusionary will remain so, and communities that are not exclusionary will be forced to house increasing numbers of the poor. If inquiry proves that this is the best possible situation, so be it. But to set the definition of proper zoning at normalcy before analyzing alternatives makes little methodological sense.⁴⁷

4. *Not Distinguishing*

Luckily, one can determine the efficacy of an inclusionary zoning program without developing a comprehensive system to differentiate "exclusionary" and "legitimate" rules. Inclusionary programs come with their own agenda: build more homes at lower prices, and make these homes available to a wider income class of people. The interesting question is not how the inclusionary program fits some theoretical model, but whether the program can accomplish its aims, and what the various effects of the program—on supply, price, and basic efficiency—will be. Most modern work on the economics of zoning follows this pragmatic approach, regardless of the side of the political spectrum from which it appears.⁴⁸ A renewed

46. The "Chicago School" typically gives legislative rules less deference to considerations of efficiency than it does the judge-made background rules of the common law. See Susan Rose-Ackerman, *Law and Economics: Paradigm, Politics or Philosophy*, LAW AND ECONOMICS 238-39 (Nicholas Mercuro ed., 1989).

47. See generally Susan Rose-Ackerman, *Progressive Law and Economics - And the New Administrative Law*, 98 YALE L.J. 341, 343 (1988) ("A reformist law and economics denies the primacy of the existing distribution of property rights while retaining the assumption of methodological individualism that is central to the economic approach."). One might wonder why such a straightforward approach needs the qualifier "reformist."

48. Cf. *Irony*, *supra* note 5, at 1184 (one should "employ[] simple tools of economic analysis to explore the merits" of zoning reform); MALLACH, *supra* note 7, at 87, (one should figure out "who is to benefit" and then decide if the reform is worthwhile); Choppin, *supra* note 8, at 2057 & n.5 (it is impossible to determine an objective baseline for regulation, but "one can deduce a cost increasing effect as well as a tendency to price out certain income groups"). One is also reminded of the methodological statements of the economist Adolph Lowe, ON ECONOMIC KNOWLEDGE chs.

inquiry into the merits of affordable housing in exclusive areas is consistent with the view that a zoning analysis generally should proceed with a straightforward examination of intentions or outcomes.

II. "Inclusionary" Zoning: Theoretical Shortcomings of Ellickson's *Irony*

Robert Ellickson's article *The Irony of "Inclusionary Zoning"* appeared in the *Southern California Law Review* in 1981, and in a collection of essays on housing policy in 1982.⁴⁹ Ellickson argues that inclusionary zoning should be seen as a subset of exclusionary zoning—as a means for suburbs to limit growth. Inclusionary programs slow growth by imposing a "double tax" on developers.⁵⁰ The first tax is the cost of building inclusionary units and selling or renting them at a loss to poor persons. This tax decreases the amount of housing supplied. The second tax is the forced inclusion of poor residents in new developments. This tax decreases the demand for new housing. According to Ellickson, suburban land owners like these effects because they increase the resale value of their old homes (which will compete with less new construction). Although the data in Ellickson's article is taken from particular experiences of local governments in California, both *Irony* and those who cite it claim national applicability for its conclusions.⁵¹

Professor Ellickson's article begins the task of determining who actually wins and loses under different zoning rules, and attempts

3, 5 (2d ed. 1977) (modern economics can no longer afford to be philosophical; it should specify the means to achieve politically chosen ends), and the sociologist Max Weber, *Science as a Vocation*, in *FROM MAX WEBER: ESSAYS IN SOCIOLOGY*, 129, 143-45 (H.H. Gerth & C. Wright Mills eds., 1958) (jurisprudence and economics cannot determine ultimate principles; they can only show us what rules will help achieve a given objective).

49. *Supra* note 5.

50. This is not a traditional tax on income or sales, but rather an added cost, imposed on builders and developers by government regulation.

51. See, e.g., TUCKER, *supra* note 7, at 14 ("Thus, inclusionary zoning ordinances designed to create 'affordable housing' have instead created a system whereby established residents of an exclusion-minded community can limit housing construction while providing subsidized housing to knowledgeable insiders—all under the pretense of helping the poor. It is no surprise that cities such as San Francisco and Boston . . . have ended up with large homeless populations."); FISCHER, *supra* note 7, at 327-28 ("It would be erroneous to conclude . . . that communities can ignore cases like *Mt. Laurel*. Even if they could, internal guilt pangs in many suburbs would require some response. Fortunately for such communities, a device has been developed that meets the appearance of equity while in fact excluding most development. It is called, ironically, 'inclusionary zoning.'").

to identify what effect those rules have on the residential market. The article also points out a possible danger of inclusionary reform: suburban homeowners may use it to restrict new construction. However, the basic premise of *Irony*—that inclusionary zoning is a tax on development that effectively decreases the supply of affordable housing—fits neither economic theory nor actual programs. Broken down to its essentials, Ellickson's article makes three mistakes typical to law and economics discourse about housing reform generally.⁵²

A. Mistaken Assumption: All Inclusionary Reforms Are Not Alike

Inclusionary programs come in a variety of forms: some require construction at high density, some at low density; some set prices for the rental or sale of the inclusionary units, some let the market decide; some occur in areas with strong demand, some in markets with few interested buyers; some occur to remedy unconscionable, historical exclusions, some seem hardly necessary; some are onerous to developers, some developers lobby for and happily accept. Ellickson, at different points in his article, notes each variation and cites a particular example from California's experience. When he begins his economic analysis, however, all inclusionary programs are reducible to three elements:

- (i) the taxation of new housing construction (to raise revenue for local social programs);
- (ii) the provision of deep housing subsidies to a tiny fraction of eligible middle- or lower-income families (to enable those families to reside in new housing projects); and
- (iii) the spending at step (ii) of revenues generated at step (i) without the legislative oversight that typically constrains government spending programs (e.g., budget review).⁵³

These three elements have little in common with the majority of inclusionary zoning programs. Most inclusionary rules are actively sought by developers, and can hardly be considered taxes.⁵⁴ Even

52. Strikingly similar flaws in conventional law and economics wisdom regarding other housing law topics are described generally in Kennedy, *supra* note 28 (the warranty of habitability applied to endangered stock can bolster the supply of housing in a stagnant market), and Note, *Reassessing Rent Control: Its Economic Impact in a Gentrifying Housing Market*, 101 HARV. L. REV. 1835 (1988) (rent control applied to existing stock can increase the supply of housing in a gentrifying market).

53. *Irony*, *supra* note 5, at 1184.

54. See *id.* at 1180. Ellickson admits that "[m]ost inclusionary ordinances entitle an inclusionary developer to build more dwelling units than the applicable zoning

the programs that developers fight at first can be profitable for them in the long-run, largely because of cost learning curves and new abilities to price discriminate.⁵⁵ Nor are most inclusionary rules properly characterized as subsidies to the poor. Persons with low to moderate incomes, who live at higher density, can often outbid the wealthy for suburban land. Although such competition is illegal under most exclusionary zoning rules, it makes little sense to normalize the *noncompetitive* baseline, and call any move toward competition among income classes a "subsidy."⁵⁶ Finally, inclusionary zoning schemes are not "government spending programs." The peculiar genius of inclusionary zoning is that the government can change the stock of affordable housing and redistribute the wealth of neighborhoods merely by manipulating the background rules of property. A vast inclusionary program need not spend a public dime.⁵⁷

Some inclusionary zoning programs do contain features that resemble the first two of Ellickson's three elements. These programs, however, are marked by other features that are equally, or more, relevant. Rules that tax developers allow them to coordinate price discrimination between inclusionary units and non-inclusionary units, meaning more revenue from wealthy buyers. Inclusionary rules that change the physical composition of the housing stock result in higher density and often a more efficient mix of inputs.

The definition of terms in *Irony* therefore creates a conundrum. In reading *Irony* to gain a broad understanding of the economic significance of *all* interventions commonly called "inclusionary zoning," one discovers that Ellickson's analysis is incomplete. If one reads the analysis narrowly, to find an explanation of *only* those "inclusionary" regimes characterized by the three elements listed, it becomes apparent that Ellickson's analytic framework is only relevant to rare, and easily avoidable, circumstances.

restrictions would otherwise allow[.]" and that, "[w]ithout question, a density bonus can reduce (or conceivably eliminate) the net tax that an inclusionary program imposes on a developer." *Id.* However, he dismisses the idea that density bonuses could be large enough to make inclusionary construction *profitable*, citing to a single survey by the California Building Industry Association. *See id.* at 1181 n.71.

55. *See infra* text accompanying notes 141-144.

56. *Cf. Southern Burlington County NAACP v. Township of Mt. Laurel*, 456 A.2d 390, 449 (N.J. 1983) ("It is nonsense to single out inclusionary zoning . . . and label it 'socio-economic' if that is meant to imply that other aspects of zoning are not.").

57. Of course, any rule change requires expenditures to write, promulgate, and enforce the rule.

B. Mistaken Baseline: There Is No "Free Market" in Housing

Ellickson's economic analysis begins with a free market in housing—a strange choice given his own recognition of the vast background of exclusionary rules.⁵⁸ Perhaps the history of the economic analysis in *Irony* explains the choice of baseline. The analysis comes from an earlier article by Ellickson on governmentally-imposed suburban growth controls, like environmental restrictions and sewer system exactions.⁵⁹ A rule requiring all developers to pay a per-unit fee to the city for the construction of an unnecessary sidewalk may well function as a tax and decrease the number of new units built.⁶⁰ But it does not follow that such an analysis can be applied to rules which *remove* restrictions on lot use and allow developers to build at higher density.⁶¹ As explained below, inclusionary rules tend to increase supply, put property in the hands of those who value it the most, and mitigate cartel restrictions on the supply of residential land. In this respect, they are more analogous to "tax relief" than "taxation."

Ellickson relies on circular argumentation to show that the current housing market is free and efficient: "the fact that market forces tend to produce economically stratified neighborhoods creates a prima facie case that this stratification is efficient."⁶² Such claims ignore the zoning rules within which "market forces" operate (and these zoning rules are the subject of the debate). A community zoning differently could encourage the *integration* of people of different income classes, and inclusionists could then opine that integration must be efficient because "market forces" produced it. Of course, one might interpret Ellickson's claim to be like Tiebout's: the zoning rules adopted by any local community will be more efficient than alternative zoning rules that could be adopted because the local community is in the best position to properly value any relevant externalities. But Ellickson, unlike the early proponents of the Tiebout theory, recognizes that local communities are in a particularly poor position for setting neutral rules.

58. Ellickson does not claim that exclusionary zoning does not exist; in fact, he attacks inclusionary zoning as merely another exclusionary phenomenon. *Irony*, *supra* note 5, at 1170.

59. *Growth Controls*, *supra* note 18.

60. *Id.* at 398.

61. Ellickson has his own ironies. In *Growth Controls*, he calls exclusionary low-density zoning an inefficient "tax"—a "deadweight loss that benefits no one." *Id.* at 397. But one can only wonder how steps taken to alleviate this "tax"—such as granting variances from the exclusionary rule—can also be considered an additional "tax."

62. *Irony*, *supra* note 5, at 1200.

Why such communities' rules deserve deference as "efficient" is not explained.

C. Mistaken Model: Filtering and the Fungible Home

Ellickson rests much of his argument on the filter theory of housing production. Commentators blame the filter theory for abandonment,⁶³ gentrification,⁶⁴ the concentration of poverty,⁶⁵ and the perpetuation of racial segregation.⁶⁶ Nevertheless, the influence of the theory, on Ellickson and others, has been profound. Conceptually, the filter theory sees the housing market as two ladders.⁶⁷ On the supply ladder are houses, arranged according to quality. On the demand ladder are housing consumers, arranged according to income. When a new house is built at the top of the supply ladder, the highest person on the demand ladder moves into it, leaving an old house vacant. Since this vacant house is better than the house belonging to the second highest family on the demand ladder, that family sells and moves into the now second best house on the supply ladder. The process continues, and every consumer eventually moves up a notch.

The logic of the model is appealing. The version I have presented is oversimplified, of course, but proponents of the model agree with its conclusion: the construction of new luxury homes benefits everybody. True proponents of the theory, Ellickson among them, add another claim: the construction of one luxury house tends to benefit the poorest consumer as much as would the construction of one cheaper house.

The price prediction element of filter theory is hardly novel: an increase in supply decreases price. The theory, however, has two additional elements that are critical, in my opinion, for anyone interested in American housing policy to understand. First, it presupposes a unitary market for all housing. A drive through any American city suggests the opposite. The market for living space *looks* highly differentiated. Consumers *appear* to bid, not against

63. Aoki, *supra* note 27, at 797-814.

64. See *Reassessing Rent Control*, *supra* note 52, at 1835-41 (1988) (arguing that gentrification removes stock from the affordable housing market without providing replacement units).

65. See Wilson, *supra* note 4, at 9-11 (discussing the concentration of urban poverty and arguing that the joblessness of inner-city residents is reinforced by the social isolation of impoverished neighborhoods); see generally DANIEL R. FUSFELD & TIMOTHY BATES, *THE POLITICAL ECONOMY OF THE URBAN GHETTO* (1984).

66. See MASSEY & DENTON, *supra* note 2.

67. The image is from Aoki, *supra* note 27, at 798.

everybody, but against particular peers interested in particular types of spaces. Markets *seem* divided by legal rules, eligibility requirements, social walls, and the simple inability of every house built for person-type A to fit the needs of person-type B. The filter theory lets housing policy ignore all that segmentation: the growth and dispersal of housing stock occurs in borderless, imaginary space. That accomplishment is even more impressive in light of empirical research which backs our intuitive sense of market differentiation.⁶⁸

The other significant element of filter theory is the practical observation that, from the government's perspective, building a home for the rich is cheaper than building a home for the poor. If the government wants to increase housing stock, so goes the theory, it is silly to subsidize low income housing construction. Any money spent must do all the work itself, because the poor have little credit or income with which to supplement the government's expenditures. On the other hand, that same subsidy, given to the wealthy, has a substantially higher multiplier effect—generating more housing with fewer public resources. In this respect, filtering policy is quite the opposite of a *laissez faire* or “free market” approach to housing construction. A housing policy based on the filter theory calls for the active redistribution of wealth to subsidize buyers and builders of luxury homes.⁶⁹

Acceptance of filter theory leads Ellickson to a technical mistake that he shares with most others who argue that filtering will adequately house the poor. Ellickson defines the “supply” of housing solely according to its market value. He pays no attention to how inclusionary zoning rules change the number and type of units built. That approach may work for some purposes, especially when it is necessary to construct a single market model, but it *cannot*

68. See generally WILLIAM APGAR, *THE STATE OF THE NATION'S HOUSING* (1990) (observing that renters and owners do not usually compete for the same spaces; and although rental space does compete with ownership space, it consistently loses); Ford, *supra* note 2 (arguing that market forces cannot cross neighborhood and jurisdictional barriers because of racism and the geographical implications of certain rules of law).

69. In the 1980s, the consumption of housing among the wealthy was heavily subsidized, ostensibly in order to solve the housing crisis among the poor. The Kemp-Roth tax cuts and the Internal Revenue Code's Accelerated Cost Recovery System, which provided tax incentives to luxury housing developers, joined existing subsidies to high-end development such as the mortgage interest deduction and certain capital gains loopholes. See Aoki, *supra* note 27, at 790. The money that was previously earmarked for the provision of public housing and the subsidization of low-end development, was redistributed, thereby ostensibly reducing waste. *Id.*

evaluate whether an inclusionary zoning intervention increases the housing stock.

For example, imagine that a luxury house sells for \$100,000, and an affordable house \$60,000. At these prices, an inclusionary rule that causes three affordable houses to be built instead of two luxury homes actually *reduces* the "supply" of housing. More reasons why this method is inappropriate are presented in Part III. For now it is enough to note that an inclusionary program seeks to supply affordable units, not expensive ones—and the cheapness of the units should not make them less significant in calculating the program's success.⁷⁰

III. Inclusionary Zoning: The Three Legal Regimes

"Inclusionary zoning" encompasses three ideal-typical legal regimes.⁷¹ Each regime has predictable economic consequences.

Regime One—the voluntary inclusionary program—lets developers choose whether to build according to the existing zoning rules or seek a density variance on the condition that they set aside part of the development for low-income housing. This regime can never be analyzed as a tax on developers because the variance/set-aside is sought by developers themselves. More importantly, the regime will always increase the stock of affordable housing—measured either in market value or in number of units created.

Regime Two—the mandatory inclusionary program—takes away a developer's choice. It *requires* the developer to dedicate to low-income use part of any new development above a certain size, but offers a density bonus to compensate the developer for possible losses. When compared to the exclusionary status quo, Regime Two will usually have the same effects as Regime One. However, it is possible to use Regime Two more aggressively than Regime One,

70. For a more realistic measurement of filtering effects in the context of inclusionary intervention, see *Calton Homes, Inc. v. Council on Affordable Hous.*, 582 A.2d 1024 (N.J. Super. Ct. App. Div. 1990) (holding that, in determining whether a local jurisdiction has met its fair-share affordable housing requirement, a court can take into account the projected number of units, built for middle- and high-income residents, which will filter down to low-income use).

71. The three regimes are ideal-typical in the Weberian sense. None corresponds exactly to a particular intervention in the real world, but, together, they represent the economically significant components of most real world interventions. Cf. Max Weber, *The Social Psychology of the World Religions* in *FROM MAX WEBER: ESSAYS IN SOCIOLOGY*, 267, 292 (H.H. Gerth & C. Wright Mills eds., 1958) ("[T]hese presentations do not claim to offer a well-rounded picture of world religions. Those features peculiar to the individual religions, in contrast to other religions, but which at the same time are important for our interest, must be brought out strongly.").

eventually imposing inclusionary obligations that developers would not freely choose. Moving from Regime One to Regime Two in this manner has two effects on the housing stock. The higher costs of development may decrease total development activity; but higher density per development will increase the number of units built for any given amount of investment. The final question is empirical, but a further increase in the stock of affordable housing is likely for a variety of reasons (outlined below), not the least of which is the inelasticity of key inputs (land) and the ability of the developer to pass on the costs of the program to wealthier consumers.⁷²

Regime Three is included just to make a point. Never used in the real world, Regime Three requires the developer to set aside units for people who otherwise could not afford them, but allows *no* density variance to offset possible losses. Surprisingly, even Regime Three will usually increase the aggregate housing stock available to low income renters or buyers. In any given market, the answer depends on the ability of the developer to reap profits from price discrimination, and the effectiveness and speed with which luxury housing units would otherwise filter down to low income residents.

The regimes are presented in order of difficulty, or how hard it is to justify them with standard law and economics reasoning. Presented with the abstract question, almost everyone would think that Regime One could increase the supply of affordable housing. Some might think the same for Regime Two. Few, if any, would put money on Regime Three. The increasing difficulty of the three arguments suggests a principle for presenting the economic concepts that are relevant to more than one regime: an economic complication will be introduced only when it is necessary to justify adoption of the particular regime being discussed. Consistent with this principle, the discussion of the voluntary inclusionary program provides the reader with a basic understanding of the economic effects of a move away from the typical exclusionary system. The

72. Included in the analysis of Regime Two is an analysis of a hybrid regime that does not have a formal system of set-asides. Under the hybrid regime—which can be called density zoning or “growth management”—a new development must have a certain proportion of high density units, even if such units bring in less revenue than low-density units. The developer can then sell the inclusionary units at whatever price the market supports. Essentially a simple policy of rezoning, the hybrid has economic effects similar to a set-aside regime. It warrants separate consideration because its administrative costs and redistributive effects are less than those of the typical Regime Two intervention. See *infra* Part III.B. and accompanying notes.

discussions of Regimes Two and Three compare these regimes with the voluntary inclusionary program in an attempt to show why *additional* steps can and sometimes should be taken.

The approach risks confusion only in regard to two concepts, perhaps the most interesting ideas raised in the pages that follow. The first is the developer's ability to price discriminate in a mandatory inclusionary regime and capture additional revenue from wealthy home buyers. In both Regime Two and Regime Three, price discrimination mitigates developer losses. The effect is larger and best studied, however, under Regime Three. The second concept is Filter Loss, the difference between the units added to the stock of high-end housing and the units "received" by the target population. Filter Loss increases the relative advisability of all three interventions. However, the extent of Filter Loss is isolated and studied in the discussion of Regime Three.

A. Regime One: Voluntary Inclusionary Programs

To a large extent, it is not the presence, but the absence, of a free market in housing that has helped create a shortage of affordable homes for many Americans. And the first repressed fact about inclusionary zoning is that many, if not most, inclusionary programs increase the profitability of housing construction. This is why the vast majority of inclusionary programs are actively sought by builders and developers.⁷³

There are two types of voluntary inclusionary programs. Both involve a regional authority granting builders choices to build in profitable ways that the exclusionary system otherwise would not allow. The first is the "builder's remedy," under which developers can challenge exclusionary decisions of local zoning boards on behalf of the public interest.⁷⁴ Statutory forms of this type of volun-

73. See, e.g., *Irony*, *supra* note 5, at 1181 ("[T]he construction of inclusionary housing in Orange County has sometimes proved profitable. There, mainly because of the absence of sale price controls, a developer may gain more from the density bonus than he loses from having to comply with the inclusionary requirements."); see also Richard Briffault, *Our Localism: Part I—The Structure of Local Government Law*, 90 COLUM. L. REV. 1, 53-55 (arguing that builders, not courts or administrators, do the best job of enforcing inclusionary zoning rules).

74. Court challenges to particularly burdensome regulation have always been possible. See *Growth Management*, *supra* note 14, at 1129 (citing early cases decided under the "arbitrary and capricious" standard). The builder's remedy represents an acceleration of the trend to allow such challenges, usually using an administrative procedure rather than state court litigation.

tary inclusionary program have been adopted in Massachusetts,⁷⁵ Rhode Island,⁷⁶ California,⁷⁷ Connecticut,⁷⁸ and Hawaii.⁷⁹ The first statewide voluntary inclusionary program, still the best example, is the Massachusetts "Anti-Snob" Zoning Act.⁸⁰

The Anti-Snob Act lets developers who are denied permits or variances to build affordable housing appeal the decision to the local zoning board.⁸¹ If the local zoning board does not schedule a hearing to address the merits of the proposal, the permit is deemed granted. If the developer loses the appeal, he or she can obtain review of the local decision (as of right) before a state committee. The state committee then decides if the denial of the variance or permit is consistent with regional housing needs. The local zoning board must demonstrate an important "health, safety, environmental, design, open space, or other local concern," and that this concern clearly outweighs the regional need for affordable housing. There is a strong presumption against the municipality unless it already contains a threshold level of affordable, multi-family housing units.⁸² Massachusetts does not police the income level of those persons who rent or buy the multi-family units; the state's program

75. Act of Aug. 23, 1969, ch. 774, 1969 Mass. Acts 712 (codified at MASS. ANN. LAWS ch. 40B §§ 20-23 (Law. Co-op. 1993)).

76. R.I. GEN. LAWS § 45-53-1 to -8 (1991).

77. CAL. GOV'T CODE § 65589.5(d)-(h)(2) (West Supp. 1996).

78. CONN. GEN. STAT. ANN. § 8-30g(a)-(f) (West Supp. 1996).

79. The Hawaii law combines a voluntary inclusionary program with a bribe—developers are given state subsidies to encourage use of the Remedy. See HAW. REV. STAT. tit. 6, § 46-15.1 (1993 & 1995 Supp.) (authorizing, among other things, county-developer partnerships and interim construction loans); MOVING AHEAD, *supra* note 14, at 36.

80. See *infra* note 83. The other voluntary inclusionary program regimes have not been consistently applied, because the reviewing state agencies often hesitate to strike local denials of building permits. See *Growth Management*, *supra* note 14, at 1134 (other states do not have the political power to enforce inclusionary rules); *Irony*, *supra* note 5, at 1168 (California local governments are too powerful and regional reform is difficult).

81. See generally Paul K. Stockman, *Anti-Snob Zoning in Massachusetts: Assessing One Attempt at Opening the Suburbs to Affordable Housing*, 78 VA. L. REV. 535 (1992).

82. The burden shifts to the developer if 10% of the local housing stock consists of low- and moderate-income units, if 1.5% of the total land area is devoted to subsidized housing, or if the development is excessively large in proportion to the community. See *id.* (citing MASS. ANN. LAWS ch. 40B, § 20). The Rhode Island and Connecticut statutes have similar provisions. See *supra* text accompanying notes 76 & 78.

seeks to increase available housing stock, believing that filtering effects will result in a workable distribution.⁸³

The builder's remedy, as discussed in more detail below, certainly has advantageous effects on the housing market. However, it may not provide a significant amount of low-income housing in areas where the poor simply do not have the income to pay market prices, even market prices for high-density construction. Unless the government is prepared to subsidize the poor's purchasing power, the builder's remedy will either not be used by builders, or will be used to construct middle-income housing, benefitting the poor only by the process of filtering. These filtering benefits are certainly important, but are no substitute for the construction of a new affordable unit in the first place, as discussed in detail in the section on Regime Three.

This problem of the buying power of the poor can be solved using market forces, without resort to government transfer payments, by a system of cross-subsidization: a "voluntary set-aside program." Essentially, the voluntary set-aside program is a conditional builder's remedy which utilizes the massive demand for forbidden suburban uses at market prices to fund the sale of a number of low-income units at prices below the cost of such units' construction. It says to builders: "We will allow you to build more market rate units in disregard of zoning rules, if you are willing to sell low-income units below your per unit marginal cost."

Several initial points about the voluntary set-aside program should be made. First, builders choose to participate in it. As a result, unless builders overestimate the profitability of low income construction (unlikely), a voluntary set-aside program can only have a positive effect on builder profits and the value of undeveloped land. If the sale of units below cost becomes so burdensome as to offset the profits that the developer makes from the zoning variances he receives in return, the developer will choose to build under the old, exclusionary rules.

Second, the voluntary set-aside program may be *more* profitable for builders than the builder's remedy. Most builder's remedy ju-

83. By 1992, the process had facilitated the construction of 20,000 affordable units. Ninety percent of the projects turned down by local boards and appealed have been approved by the appellate authority. See *MOVING AHEAD*, *supra* note 14, at 15. But cf. Peter Canello, *After Twenty Years, Anti-Snob Zoning Proves Ineffective*, BOSTON GLOBE, Jan. 1, 1981, at 1 (local resistance has resulted in only twenty-eight of the state's 351 communities reaching the 10% goal); Stockman, *Anti-Snob Zoning*, *supra* note 81, at 557 (affordable units have benefited the elderly more than the urban poor).

risdictions grant relief from local zoning rules only for proposals to build affordable housing. The set-aside program gives builders a variance to construct whatever sort of housing is the most profitable, including dense, luxury housing, as long as some portion of the resulting profits are used to build affordable units below cost. In areas where putting the first condominium complex in Arcadia would create huge returns, builders could fund a considerable inclusionary project and still profit handsomely.

Third, the voluntary set-aside program is self-limiting and cannot be misused. The program is driven by the developer's ability to capture the pent-up value of the exclusive neighborhood (the following section introduces the concept of the Exclusivity Premium, describing its various components). As the remedy is used more frequently, however, the market value of living in the neighborhood will fall because of the density of construction and the type of person that inclusionary zoning allows to live there. As the Exclusivity Premium that comes with the purchase of a home in the neighborhood falls, builders will receive less for the market-rate units they construct. No longer willing to pay the inclusionary penalty necessary to get a density variance for market rate units, future developers will opt out of the inclusionary zoning regime, choosing instead to build without penalty under the exclusionary rules. The new low-density construction will buttress the falling Exclusivity Premium. In the long run, the competition between the two systems (exclusionary and inclusionary) will keep either from being used too intensively.

Finally, the voluntary set-aside program is not incompatible with the builder's remedy. A jurisdiction can easily offer builders all three options—dense low income construction at market rates, dense luxury construction with a set-aside, or low density luxury construction under the exclusionary status quo.

The effects of both types of voluntary programs on the supply of housing, the profits of builders, and the value of land in the jurisdiction are similar. The distributive effects of the two voluntary programs are different, however, because a voluntary set-aside program often involves the transfer of considerable wealth from existing homeowners to the purchasers of low income units. The following discussion focuses on the voluntary set-aside program, largely because its economic effects are more interesting. Differences between that program, also simply called "Regime One," and the builder's remedy are highlighted throughout.

1. *Why Builders Want Density Variances*

a. *Arbitrage Profits*

A density variance, as the name implies, allows a builder to build more homes on a plot of land than zoning rules would otherwise allow. Builders want density variances whenever high-density users (often the less wealthy) can outbid low-density users (often the rich) for space. Without exclusionary zoning, wealthy people would often be outbid. The historical growth of Boston provides an example. The city grew in a system of concentric rings, with large single-family homes always on the outermost edge. As market pressure in the inner rings grew, low-income residents bought out the higher-income residents who lived on the outer edge.⁸⁴ Contrary to modern protestations by suburban landowners about poorer newcomers' effects on property values, the value of residential land on the outer edges of unzoned Boston increased dramatically as population density increased. Higher-income homeowners sold, made a profit, and used the money to move out further.⁸⁵

Speaking very generally, the market power of excluded low-income demand is even stronger now than in 19th century Boston, which was, to a much larger extent, a free market in residential land.⁸⁶ The ubiquity of exclusive zoning today has created a shortage of residential land for multi-family units and a surplus of residential land for single-family uses. A suburban developer, therefore, can make an arbitrage profit by "moving" land zoned for the single-family market, where land is cheap, to the multi-family market, where land is artificially dear.

b. *Construction Cost Savings*

High density construction uses radically fewer resources per unit than low density construction. The use of less land is only one source of cost savings. Figure 1 shows one economist's estimate of non-land cost savings created by "clustering"—building units near one another:⁸⁷

84. In other words, land on the outer edges was transferred to the highest-valued use. See SAM B. WARNER, JR., *STREETCAR SUBURBS: THE PROCESS OF GROWTH IN BOSTON, 1870-1890* (1962).

85. *Id.*

86. Of course, the role of race and class in 19th century Boston meant that the market for land was—as a matter of historical fact rather than economic ideal—not as free as the text above supposes.

87. Potential cost savings are shown as a percentage of the total per unit cost of a typical single-family subdivision home; the same amount of land is used in all columns. The table is adapted from comparative cost information contained in MAL-

Figure 1: Cost Savings From Higher Density Construction

	Cluster Subdivision	Cluster Townhouse	Garden Apartment	High-rise Apartment
Streets	14%	31%	52%	74%
Sewers	34%	58%	75%	85%
Drainage	33%	55%	71%	82%
Water	34%	57%	70%	82%
Gas & Electric	42%	63%	74%	85%
Total Improvements	24%	50%	67%	80%

These cost savings result directly from the technical economies of denser construction. Not included are cost savings that would arise if developers were no longer obligated to comply with other exclusionary restrictions. Such restrictions take many forms and often exist for no purpose other than to screen the income level of potential buyers in order to protect or increase the neighborhood's exclusivity.⁸⁸ Such restrictions include square footage requirements, set-back requirements, excessive paving of streets where there is little traffic, sidewalks where there are few pedestrians, unwarranted parking spaces, drainage systems, and other burdens.⁸⁹

c. More Efficient Use of Productive Resources

A related source of cost savings is the increased ability of developers to use a more efficient mix of inputs for the construction of homes. Site improvements are a substitute for land.⁹⁰ Zoning restrictions that forbid the use of substitutes effectively force buyers to consume more land than they otherwise would. This results in the under-utilization of cost-effective construction inputs like labor, materials, design, and technology.⁹¹ Of course, the services specifically called for by the exclusionary system (e.g., suburban driveway paving) will be used less. To lament this convincingly, however, a critic of the voluntary set-aside program would have to show that the suburban zoning authority is in a better position than

LACH, *supra* note 7, at 60 (citing THE COSTS OF SPRAWL (Real Estate. Res. Corp. 1974)). But see RANDALL J. POZDENA, THE MODERN ECONOMICS OF HOUSING 51 (1989) (after a certain point, higher density may lead to increasing per unit costs because of the difficulties in building increasingly taller structures).

88. See *Growth Controls*, *supra* note 18.

89. More examples appear in MALLACH, *supra* note 7, at 61-62.

90. See POZDENA, *supra* note 87, at 53-54 (guessing that the relevant elasticity is about 0.5).

91. In this way, many American suburbs overuse space, using sprawl rather than quality of design to create a feeling of comfort or opulence.

either the developer or the buyer to gauge the relative value of additional driveways.⁹²

2. *Impact on the Housing Market*

A voluntary set-aside program will raise the supply of multi-family housing whenever there are builders who take advantage of the program. This increase in the supply of multi-family housing in an area, say a particular suburb, should have two related effects. First, the price of multi-family housing in the suburbs should fall. Second, the price of multi-family housing in the city and adjacent suburbs should fall, as competing owners and tenants move away.

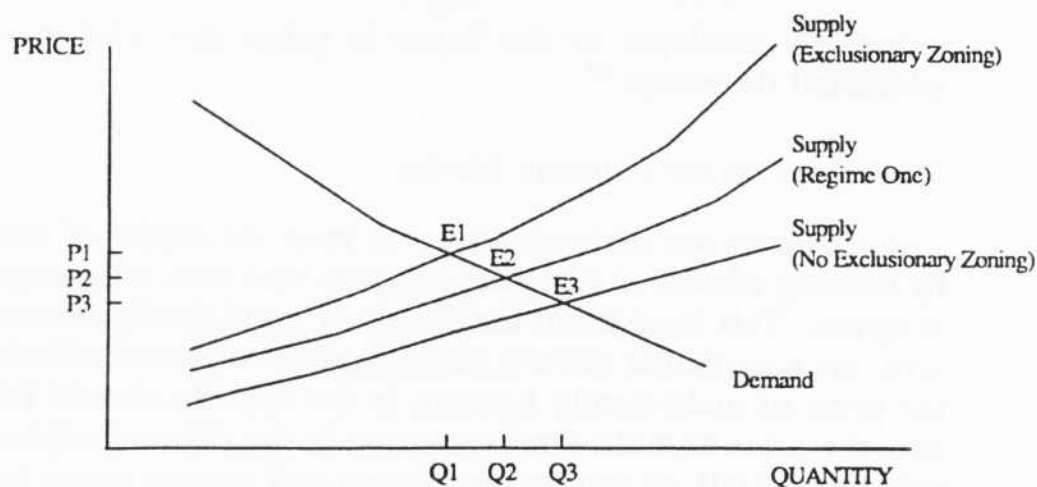
a. *Supply in the Suburbs*

The basic economics of the voluntary set-aside program are depicted in the demand and supply graph below. The parties who stand to benefit most from the increased supply are new consumers of housing, builders, and landowners. Exactly how much each group will benefit depends upon the elasticity of the relevant supply and demand curves. The following graphs assume that consumer demand is considerably, but not perfectly, price elastic (i.e., a small decrease in price will result in a significant increase in the number of potential purchasers). Not all suburban jurisdictions fit that assumption. In some, the number of potential entrants is limited by demographics, racism, or a huge gap between the asking price and the price most potential homeowners can pay. Nevertheless, considerable elasticity can be assumed for jurisdictions with exclusionary zoning laws. If demand were inelastic, exclusionary zoning would be unnecessary or ineffective, since the price distortion it creates would not affect the number of in-migrants.

Figure 2 shows three hypothetical, long-term supply curves (short-term supply is almost perfectly elastic)⁹³ for a jurisdiction which is considering the imposition of a voluntary inclusionary zon-

92. It is possible (although difficult) to argue that driveways, sewer systems, setbacks, and lot density need to be regulated as public goods. Even if successful, the argument does not prove that the local official will have the knowledge or motivation to set factor use requirements appropriately.

93. The supply of housing stock is perfectly inelastic in the short-run. The supply of housing services (how much housing that stock can provide) is slightly elastic because of vacancy rates and the ability to double up. The short-run elasticity has been estimated at 0.2 (a 10% increase in price causes a 2% increase in services provided). See generally POZDENA, *supra* note 87, at 35-46.

Figure 2: Regime One—Supply Curves

ing program.⁹⁴ The first supply curve represents the supply of housing units under an exclusionary zoning regime. Supply is very price-elastic up to a certain quantity. As more units are built, however, appropriate land in the suburban jurisdiction becomes more expensive to locate and less convenient to develop. Supply is less price elastic at high quantities, when the jurisdiction begins to run out of appropriate tracts.⁹⁵ The graph assumes that the zoning decision makers will not change the exclusivity of the regime regardless of the level of demand. That assumption may be partially incorrect—single suppliers (landowners) or consumer representatives (developers) may bribe the local polity toward a more efficient result than the exclusionary baseline otherwise allows. In any event, the first equilibrium (*E1*) generates a price of *P1* and a quantity of *Q1* homes.

The second supply curve shows the supply of units with a voluntary set-aside program widely available. The outward shift of the supply curve reflects the additional units for which a variance is obtained. The shift increases in magnitude as price and/or quantity increases. The change in magnitude represents the fact that density variances, although always cost-saving, represent increasingly larger cost-savings as conveniently-located residential land becomes scarcer. For instance, with low demand and abundant land,

94. Supply for larger regions is more elastic. *Id.* at 45. For example, the long-run elasticity of housing supply (stock or services) in America has been estimated at .05 by Frank de Leeuw & Nkanta Ekanem, *The Supply of Rental Housing*, AMER. ECON. REVIEW 806-17 (1971).

95. The elasticity of the supply curve for all productive factors except land is extremely elastic. Richard F. Muth, *The Demand for Non-Farm Housing*, in *THE DEMAND FOR DURABLE GOODS* 29, 44 (Arnold C. Harberger ed., 1960).

few builder's remedies will be sought and the ones that will be sought will be small (duplexes). With high demand and scarce land, builders will seek large variances (apartment buildings). The second equilibrium ($E2$) generates price $P2$ and quantity $Q2$.

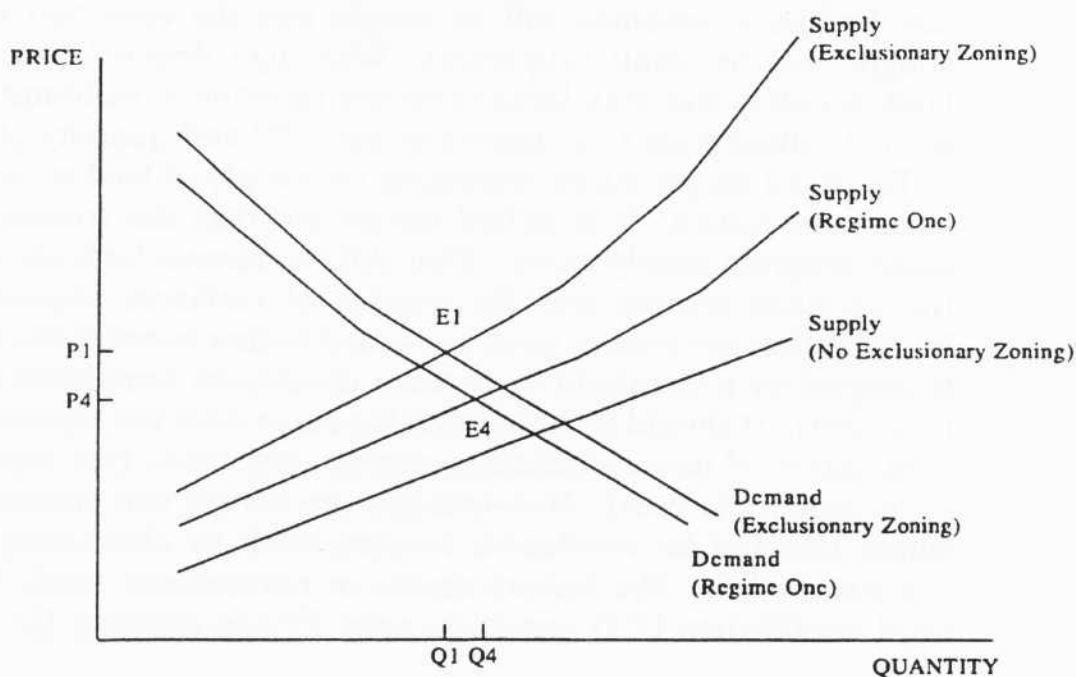
The third supply curve represents the supply of land without exclusionary zoning. It is shifted further out than the voluntary set-aside program supply curve. That shift represents both the cost of the variance process and the number of variances requested by builders that the system does not award (either because the system is capped by a threshold or because developers sometimes lose in litigation). It should be noted that the curve does not represent the elimination of non-exclusionary zoning restrictions (the regulation of incompatible uses). Non-exclusionary zoning can increase consumer demand for residential housing stock by eliminating negative externalities like factory smoke or burdensome traffic.⁹⁶ The third equilibrium ($E3$) generates price $P3$ and quantity $Q3$.

b. Demand and the Exclusivity Premium

The picture is complicated somewhat when one adds the influence of exclusionary zoning on market demand. Potential buyers may pay more than they otherwise would for a home in an area if the area has exclusionary rules. The price difference—or Exclusivity Premium—is the purchase price of two types of "goods" that immigrants value. First, it is a charge for the jurisdiction's higher return on property taxes, resulting in better services, a lower tax rate, or both. Second, it is a charge for the prestige value of the address, the income or racial homogeneity of one's neighbors, and a sense of social or physical safety. The demand curve for the voluntary set-aside program is shifted slightly back at all price levels to reflect the decrease in the amount of Exclusivity Premium that immigrants will pay once zoning rules are relaxed. The new equilibrium point ($E4$) results in price $P4$, and quantity $Q4$, as shown in figure 3.

There are three reasons why this drop in demand is unlikely to be very large. First, developers make the supply decision based on profitability, predicting future demand curve shifts. If certain elements of the community's exclusive charm have a bigger demand-side effect than the supply-side effect of density variances, developers will not shoot themselves in the foot by seeking a density bonus

96. Any attempt to locate this distinction cannot withstand analysis; but the existence of a division, somewhere, is beyond doubt.

Figure 3: Regime One—Supply and Demand

conditioned on the payment of an inclusionary penalty. This built-in safeguard stops the quantity supplied after the intervention ($Q4$) from ever dropping lower than the quantity supplied before the intervention ($Q1$). Second, developers use several tactics to integrate developments without losing prestige value. One of the simplest and most effective is the construction of the most prestigious-looking units in a development first.⁹⁷ Third, the jurisdiction, if it wishes, can guard against the demand shift by manipulating the size of the density bonus and subsidy.⁹⁸

However, there is a better reason to dismiss the demand shift than its small size. The demand shift actually serves one of the goals of the inclusionary program: it further decreases the price of suburban housing. As a matter of economic theory, the demand shift is troubling because it means that consumers of suburban housing are getting less of a product that they value. However, one

97. See MALLACH, *supra* note 7, at 95. Significantly, the ability to integrate income levels changes when one moves from single- to multi-family housing. *Id.* at 98 (visual homogeneity is easy to achieve in developments with units of varying sizes, but more difficult to achieve when the entire development is composed of single-family homes).

98. Jurisdictions using the builder's remedy can also set limits on the inclusionary program. In Massachusetts, for example, the builder's remedy is shut down as soon as 10% of the units or 1.5% of the land in a community is devoted to affordable housing. See MASS. ANN. LAWS ch. 40B, §§ 21-23, *supra* note 75.

should consider the peculiar nature of the product (Exclusivity Premium) that consumers no longer purchase.

The first component of the lost Exclusivity Premium—the higher return in public services per tax dollar—is not an economic “good” when looked at from a regional, rather than municipal, perspective. The higher return on the suburban tax dollar is created by legal rules that allow the residents of suburbs to pay only for those local public services (schools, police, fire, water, sewer, parks) that are offered within the suburban jurisdiction. Although state and federal money lessens the effect of this tax segregation, suburban residents do not pay to support many public services offered (or not offered) by other jurisdictions in the greater metropolitan area where they live and work. The first part of the lost Exclusivity Premium, in other words, consists of the suburban residents’ profits from the selective Balkanization of the region’s tax base.

Valuing a neighborhood’s exclusivity from a regional perspective suggests that the primary legitimate externalities taken into account by a local zoning authority in setting an exclusionary barrier—impact on taxes, schools and local public services—are economic nullities. When a poor family moves into a wealthy suburb, the suburb’s per capita tax base will fall, but the region’s per capita tax base will not change. Instead, the tax component of the Exclusivity Premium will be redistributed from the suburbs to another zoning jurisdiction, as the return in services per tax dollar moves toward equality throughout the metropolitan area. As economists are fond of pointing out, *if* nothing is lost to the region, the simple distribution of wealth (here property taxes not paid) is not a valid, first-order economist’s concern. We can therefore discount—considerably but not completely—the loss in tax base segregation available for purchase.⁹⁹

The other part of the Exclusivity Premium, neighborhood prestige and socio-economic homogeneity, cannot be discounted without reference to subjective political values. Some feel that income segregation is good because it encourages residents of bad neigh-

99. Some commentators use the Tiebout theory of local government to argue that this selective Balkanization is efficient because it allows consumers a choice about the type of suburb (low tax/low service or high tax/high service) in which they would like to live. See, e.g., Bruce Hamilton, *Property Taxes and the Tiebout Hypothesis: Some Empirical Evidence*, in *FISCAL ZONING AND LAND USE CONTROLS* (Edwin S. Mills & Wallace E. Oates eds., 1975); FISCHEL, *supra* note 7, at 293-315. I think that argument cannot stand up against either the presence of so many low tax/high service suburbs and high tax/low service cities; or against popular opinion that taxation should be progressive—redistributing wealth from the shielded rich to the fenced-in poor.

borhoods to work hard so they can move into good ones. Putting that attitude aside, few commentators would give the desire for segregation equal status with the physical aspects of a home, at least when entertaining the question of how much housing society should produce. Stricter economists, in order to avoid going "normative," might stick to the principle that only the market can determine value. Most, however, would likely discount the "good" of racial segregation—which may or may not be a significant portion of a suburb's value to its incumbent and potential residents.

3. *Distributive Effects of Regime One*

Inclusionary zoning not only increases the amount of housing built, it transfers to poor and middle-income people the money and market power they need to buy it. The distribution of wealth worked by inclusionary zoning can be extremely significant, depending on the market forces at work in a particular jurisdiction.

A voluntary set-aside program transfers wealth from existing suburban homeowners and people shopping for luxury properties to developers, contractors, landowners, people shopping for affordable housing in the region and, of course, people who move into inclusionary units. It should be noted, however, that the situation is not one of simple redistribution (i.e., a zero-sum game). If there is inefficiency in the exclusionary system—because regional externalities are *not* counted by the zoning authority, because illusory local "externalities" *are* counted, or because the home owners act like a cartel—then a move away from that system will create more wealth in the winners than it takes from the losers.¹⁰⁰

a. *Existing Homeowners*

Existing homeowners in the suburbs will see an increase in the value of their land and, most likely, a decrease in the total value of their home (land plus house). The increase in the value of their land represents the new possibility of a higher-density use. The decrease in the value of their house represents two separate losses that will likely offset that gain in land value.

(i) *Loss of Exclusivity Premium*

Part of the decrease in house value represents the Exclusivity Premium that the homeowner previously could have obtained

100. The winners here are the landowners, developers, and buyers of dense market units, and the low income buyers of the below-cost set-aside units. Obviously, the exact extent to which the transfer is truly "efficient" cannot be predicted easily.

upon resale. The effect of the Exclusivity Premium on housing price is considerable. Economists have estimated that it is about 50% as significant in the buying decision as the physical condition of the unit.¹⁰¹ The amount of lost Exclusivity Premium depends on the number of inclusionary units, the character of these units, the new residents who live in them, and the attitudes of potential purchasers of the existing residents' homes.

Of course, the welfare of an existing homeowner is affected not only by the sale price of his home, but also by his or her subjective valuation of benefits of exclusivity. Special concerns for the "character" of the neighborhood may significantly decrease the value an individual attaches to his or her home—as may the possible existence of racial preferences—even if the market price remains relatively constant.¹⁰² Under these circumstances, inclusion would "force" sales of homes from such residents to newcomers for whom the changing character is less important.¹⁰³

(ii) Loss of Cartel Profits

Any drop in resale value that does not correspond to lost Exclusivity Premium represents a partial move from cartel to competitive pricing. When suburban landowners incorporate a physical area containing residential land, and set rules regarding the disposal of that land, they have the ability to regulate supply in much the same manner as a traditional manufacturer's cartel. Because new stock is a close substitute for old stock,¹⁰⁴ homeowners who can limit the amount of new construction may increase the resale value of their homes.¹⁰⁵

There is considerable debate about the size of the price change caused by suburban land cartels, although no responsible study claims that the effects are insignificant.¹⁰⁶ Cartelization is blamed

101. See POZDENA, *supra* note 87, at 145.

102. These preferences are described in the literature on "tipping"—cumulative and accelerating change in the racial composition of neighborhoods. See, e.g., RICHARD P. TAUB ET AL., *PATHS OF NEIGHBORHOOD CHANGE: RACE AND CRIME IN URBAN AMERICA* 140-66 (1984) (presenting an equilibrium theory of change in the race-based component of the Exclusivity Premium).

103. *Id.*

104. *Irony, supra* note 5, at 1191.

105. FISCHER, *supra* note 7, at 141-43.

106. The word "study" is significant. Some economists have suggested that the availability of alternative sites erases the possibility of monopoly profits. This work is of no use because it merely *hypothesizes* the availability of such sites. Muth, for instance, suggests that consumers cannot suffer from the oligopoly power of suburban jurisdictions because they can always go start their own new communities elsewhere.

for both a high national level of prices and particular local aberrations.¹⁰⁷ The most frequently cited example of the latter is the rise to power in Maryland's Fairfax, Montgomery, and Prince Georges counties of anti-development politicians in the early 1970s.¹⁰⁸ Presumably in response, "the average sale price of new homes in the Washington area jumped 101% between 1968 and 1975, easily the largest increase over that period in any major metropolitan area."¹⁰⁹

The incentive and ability of a jurisdiction to reap cartel profits from a system of density restrictions depends upon the jurisdiction's market power (the elasticity of the demand curve that the cartel faces). Size is one means of achieving market power, and a single jurisdiction may be large enough to have a price effect by virtue of its own zoning rules. However, some research suggests that large jurisdictions with centralized government structures are also more likely to be dissuaded from cartel behavior by developer lobbying.¹¹⁰

The twenty-five largest American metropolitan areas are, with a few exceptions, Balkanized. Such metropolitan areas with many different incorporated cities suffer from cartelization in two instances.¹¹¹ First, cartels arise if small jurisdictions coordinate their behavior. Because zoning is legal, price fixing is not difficult. An incentive to cheat the cartel exists only if the jurisdictions can levy development fees, or develop some other means of exacting and accepting payment from buyers for the granting of variances.

Second, a suburban jurisdiction may possess "unique attributes," to use Ellickson's term. Indeed, the Balkanization of suburbia might be understood, not as a sign of the polities' mutual weakness, but as the result of conscious local decisions to differentiate successful suburban products.

Antitrust analysis is not perfectly adaptable to suburban growth controls—several factors make a suburban cartel far more powerful than a cartel of manufacturers. First, the tendency to restrict

See Panel Discussion: *Redistribution and Regulation of Housing*, *supra* note 19, at 803-04 (statement of Richard Muth).

107. *E.g. Growth Controls*, *supra* note 18, at 434. But see FISCHEL, *supra* note 7, at 147 (demonstrating Fischel's dislike for the monopoly model, although he grudgingly concedes its relevance).

108. *Growth Controls*, *supra* note 18, at 434.

109. *Id.* at 434 n.131.

110. See Panel Discussion: *Redistribution and Regulation of Housing*, *supra* note 19, at 803.

111. See FISCHEL, *supra* note 7, at 148; *Growth Controls*, *supra* note 18, at 408.

supply and increase price is not mitigated by concerns about volume. A manufacturing cartel loses volume (and therefore some revenue) with every price increase. The suburban homeowner, on the other hand, has only one house, and cannot usually produce more. He or she will price above the level of a normal cartel, because owners of undeveloped land, often nonresidents without a voice in cartel policy, are the only ones who suffer the volume loss. Second, any decrease in the supply of suburban homes increases the Exclusivity Premium and thereby increases demand and, eventually, price. This "feedback" effect on the Exclusivity Premium means a greater incentive to restrict supply. Third, the suburban land cartel is more effective than traditional cartels because members can openly coordinate behavior and have a perfect mechanism to enforce mutual compliance: zoning law.

Cartels restrict production and raise price, causing buyers to pay more than the economic cost of a good. Cartels also cause allocative inefficiency because they keep scarce capital in the hands of persons who are not using it efficiently. The elimination of cartel prohibitions on the use of a resource—here the land that supports a house—results in the transfer of that resource to the highest-valued user and use.

b. Buyers of Large Lots

Although the average cost per unit in suburbia will fall, the price of land (per acre, not per unit) should increase as more land uses are allowed. The higher price of land means that the total price of a new low-density, single-family home in the suburban jurisdiction will likely increase under Regime One.¹¹² The price increase represents a reduction in a subsidy. Under the exclusionary regime, the legal prohibition of higher-valued uses subsidized the purchase of land. Obviously, that subsidy shrinks as developers have more freedom to use land as the market sees fit.¹¹³

c. Builders and Owners of Developable Land

Those who supply the inputs necessary to build homes will benefit under a voluntary set-aside program. It is difficult to say how much a particular supplier will benefit without detailed knowledge of local market conditions. In areas where builders have market

112. Unless all the parcels being used for new single-family construction are not appropriate for multi-family development.

113. Large-lot suburban home buying would remain one of the most heavily subsidized economic decisions in the United States. See *supra* text accompanying note 21.

power and/or the ability to exclude rivals, builders may stand to make considerable profits from the inclusionary system. In areas where landowners have market power, the landowners will reap the benefits of an increase in the market value of their land.

There is one complication to the rosy picture. I have said that builders cannot be harmed by a voluntary set-aside program because any builder can opt out of a burdensome program and build under the old rules. But a problem arises for builders who opt out. Before the opportunity to get the inclusionary variance was available, the buyers to whom the builder sold homes were basically assured of a certain population density in the future. When the voluntary set-aside program is created, however, home buyers will know that future builders may choose to build under the voluntary set-aside program. These homebuyers may not pay as much for the exclusive construction as they otherwise could. Given the natural limits of the voluntary set-aside program, it is difficult to know how important to their purchasing decision homebuyers might consider the possibility of scattered set-asides (remembering, of course, that a regional intervention means a similar chance of inclusionary development throughout the region). To the extent that the fear of the included poor does harm builder profitability, as it might in areas marked by racism, the effects of the voluntary set-aside program become similar to those of the mandatory set-aside program "Regime Two," discussed below.

d. The Included Poor

By far the most extraordinary point about the voluntary set-aside program is its ability to provide, without spending a public cent, below-cost housing to poor persons who otherwise could not afford it. The magnitude of the benefit for the poor who need homes depends on the size of the inclusionary set-aside and the number of builders who chose to take part in the inclusionary program. Obviously, both of these factors in turn depend on how profitable it will be to build in the exclusionary neighborhood. These observations lead one directly to an epiphany that combines both the "invisible hand" logic of classical economics and a modern sense of fairness: *the more extreme and economically unwarranted a local neighborhood's exclusionary rules, the more incentive builders will have to construct affordable units in that neighborhood.* If a neighborhood has zoned "fairly" and has zoning rules that do not exclude all high value residential uses, builders will not have an incentive to construct affordable units in that neighborhood. In

other words, the homeowners that have benefitted the most from the system of suburban incorporation and inclusionary zoning will be hit the hardest by the voluntary program. Homeowners in moderately exclusionary jurisdictions will be hit only slightly, or not at all.

There is one objection to the voluntary set-aside program on grounds of efficiency. The builder's remedy, which simply allows a forbidden transaction and sells units at market price, will be efficient unless the ignored zoning rule was justified by legitimate, regional externalities. The voluntary set-aside program, however, goes one step further and bestows a good at a price below the market price. Such "in-kind" subsidies are roundly criticized as inefficient by economists, because they contain a restraint on alienability. A gift of cash, so the theory goes, could be spent as the recipient sees fit. A gift of a home, however, risks overconsumption and a departure from Kaldor-Hicks efficiency.¹¹⁴ One reply to this criticism is that the efficiency loss from the in-kind subsidy is unlikely to be greater than the huge efficiency gain from allowing thousands of forbidden market-rate transactions. But that reply, although important in justifying a voluntary program as a replacement for the status quo, is a little disingenuous. It would be possible, instead of forcing builders to build below cost units, to require them to pay an amount of money into a fund that would then be simply distributed to poor. The reply to this argument is horribly un-economic: such a system is unlikely to be as politically palatable as a system that simply constructs homes.

Furthermore, in considering the relationship of the subsidy to the buying power of the poor, it is also important to remember the *source* of the wealth. Even if there are inefficiencies in the expenditure of the subsidy, there are few, if any, inefficiencies in the collection of it. Part of the wealth comes from the owners of undeveloped land. A tax on land rents is essentially efficient.¹¹⁵ Part of the wealth comes from existing suburban residents. This part of the transfer is the least problematic: it represents a corrective tax on cartel rent that improves resource allocation.¹¹⁶ The

114. So claim FISCHER, *supra* note 7, at 333; and *Irony*, *supra* note 5, at 1196-97.

115. The tax is only "perfectly" efficient if all uses of land are equally discouraged—otherwise allocative decisions are changed. Nevertheless, since the 19th century, economists have recognized that the price of land (unlike the price of improvements on land) is pure economic rent (i.e., "producing" land has no cost).

116. See PHILLIP AREEDA, *ANTITRUST ANALYSIS: PROBLEMS, TEXT, CASES* 83-85 (4th ed. 1988) (damage actions deter monopolies by threatening to take a portion of the monopolies' economic rent); Michelle J. White, *Suburban Growth Controls: Lia-*

remainder of the wealth comes from non-inclusionary home-buyers. The taking of this tax can be seen as a correction of the allocative effects of the existing subsidies to luxury home consumption, subsidies that cause the overconsumption of land relative to other construction inputs.

e. Buyers of Affordable Housing Who Do Not Receive Inclusionary Units

Assuming *any* substitutability of demand, the increase in suburban stock should decrease the price of housing in the entire region. In the city and less restrictive neighboring suburbs, the increase in suburban stock will remove some housing buyers, often the wealthier. The departing homeowners will leave behind decent, vacant housing, and persons with slightly lower incomes will buy it (absent gentrification or re-industrialization).¹¹⁷ For renters, lower suburban ownership prices will decrease the maximum rent that city landlords can charge without losing tenants.¹¹⁸ Massive departures may have side-effects like deterioration and abandonment, but the voluntary set-aside program, for the reasons mentioned above, is unlikely to be used so extensively.

f. Public Sector Costs

The public costs of a voluntary set-aside program are minimal. Besides drawing up and implementing regional rules, the only public costs involve running the simple system of eligibility controls that determine who can live in the set-aside units. Jurisdictions that have mandatory set-aside programs have met these costs by garnishing a modest portion of the developer's profits from the density variance.¹¹⁹

The public cost of a builder's remedy regime (where the units are sold at the market rate) are even less. The builder's remedy requires only a judicial or administrative system for appealing local zoning decisions. Of course, persons who buy or build the inclusionary units might benefit from existing federal and state affordable housing programs. Any such subsidies, including housing tax cred-

bility Rules and Pigovian Taxes, 8 LEGAL STUD. 207, 225-30 (1979) (suggesting that exclusionary zoning be taxed to offset its external social and economic costs); Boger, *supra* note 17, at 71 (proposing changes to the tax code so that "property holders in municipalities that choose to ignore their proscribed housing goals would progressively lose their mortgage interest and property tax deductions.").

117. The limits of this filtering process are described *infra* in Part III.B.1.a.

118. See POZDENA, *supra* note 87, at 100-14.

119. See *infra* Part III.B.2.e.

its, will make the voluntary set-aside program more effective (i.e., more profitable, and therefore more widespread).¹²⁰ Research suggests that financing help, in addition to subsidization, is important when the voluntary set-aside program is meant to encourage ownership among the less wealthy.¹²¹

4. *Effects of Regime One: Running Summary*

The voluntary set-aside program should increase the stock of housing available to low- or moderate-income persons. In fact, there is no basis in economic theory for rejecting the voluntary set-aside program. If overused, the program may damage the Exclusivity Premium that the neighborhood charges its new residents. But this can only occur if market failure stops the customers of the developer from valuing the Exclusivity Premium, or from communicating their preferences to the Builder. Furthermore, most of the Exclusivity Premium stems from the effects of tax base segregation—and any change in the local distribution of wealth is not a regional loss. Finally, the portion of the lost Exclusivity Premium that remains (feelings of separateness and racism) is simply outweighed—empirically and normatively—by the transfer of development sites from low to high value uses.

Although certainly not necessary to justify it as a matter of sound economics and housing policy, the distributive fairness of the voluntary set-aside program is an additional benefit. It transfers wealth from those persons who have benefitted most from the system of exclusionary rules to those whom the system has most injured.

B. Regime Two: Mandatory Set-Asides With Density Bonus

It would be nice if one could blame the American housing market's failure to provide inexpensive homes solely on exclusionary zoning rules. Such rules certainly have done their share of harm, but even if exclusionary rules were eliminated tomorrow, the lack of buying power among the poor would still result in some home-

120. See generally *THE AFFORDABLE CITY: TOWARD A THIRD SECTOR HOUSING POLICY*, (John Emmaus Davis ed., 1994) [hereinafter *THE AFFORDABLE CITY*].

121. The American system of mortgage financing places great emphasis on credit history and down payments. Many families denied financing are wealthy enough to own a home, and actually pay higher monthly rental payments than the potential mortgage payment would be. Allan Mallach, *The Legacy of Mt. Laurel: Maintaining Affordability in New Jersey's Inclusionary Developments*, in *THE AFFORDABLE CITY*, *supra* note 120, at 226, 242 & n.23.

lessness and shelter poverty in some urban areas.¹²² Transfer payments from the state or federal government are one solution to the problem of buying power among the poor, to the extent one considers this lack of buying power a problem. (In the same manner, transfer payments from the state or federal government currently magnify the buying power of better-off residents in the suburban housing market, as discussed below.) In the affordable rental market, such transfer payments include Section 8¹²³ and, at least until recently, Moving to Opportunity¹²⁴ housing vouchers. Yet the political will to provide deep subsidies from public funds does not exist.

A voluntary set-aside program creates precisely this subsidy, using market forces to transfer wealth to the poor from those people who benefit most from the inefficiencies of the exclusionary regime: suburban landowners and people who buy large lots. In moving from a voluntary to a mandatory regime, the depth of that wealth transfer increases dramatically, without any resulting loss in the number of new homes built.

The mandatory set-aside program—Regime Two—effectively rezones land, setting requirements on local governments *and* developers. The program has two parts. First, it *forbids* any developments above a minimum size, unless the developer reserves some of the units for moderate-income residents. Second, it gives the developer a density bonus to help offset possible revenue losses because of the inclusionary obligations.

The State of New Jersey and various counties in California have adopted Regime Two inclusionary programs.¹²⁵ New Jersey's *Mt.*

122. Shelter poverty is the condition of a person who is forced to pay out a large portion of a small income in exchange for barely adequate housing services, leaving little left for other necessities. See Aoki, *supra* note 27, at 817.

123. Section 8 is the major American housing subsidy, providing poor families with housing vouchers redeemable anywhere within a certain set of communities. 42 U.S.C. § 1437 (1994).

124. The Moving to Opportunity Program (MOP) was intended to help a small number of poor families move from high-poverty to low-poverty communities. See Housing and Community Development Act of 1992, Pub. L. No. 102-550, § 152, 106 Stat. 3672, 3716-17 (42 U.S.C. § 1437f note). Like the Section 8 program, for which funding has consistently fallen, the MOP has come under attack in Congress. See 141 CONG. REC. S13,844 (statement of Sen. Mack) (describing proposed changes in Section 8 voucher program); S. 1260, 104th Cong., 1st Sess. § 206(j) (1995) (proposing repeal of the MOP).

125. See Laura M. Padilla, *Reflections on Inclusionary Housing and a Renewed Look at its Viability*, 23 HOFSTRA L. REV. 539, 558-64 (1995). Certain counties in California have used Regime Two plans since the middle 1970s, and California is currently contemplating a state-wide mandatory program along the same lines. *Id.*

Laurel system, for example, targets new developments in communities that have little low-income housing.¹²⁶ Builders in these communities must set aside one-tenth of the new units for moderate-income use (50% to 80% of area median income) and one-tenth for low-income use (less than 50% of area median income). A proposed statewide program in California is more flexible and allows each local government to conduct a feasibility study to determine the number of inclusionary units that the local housing market can support.¹²⁷ The California and New Jersey programs each allow developers to concentrate inclusionary units in one part of the development, to mix them in with more expensive stock, or even to build them off-site. Inclusionary units may be identical to more expensive units, or they may be smaller and less luxurious.¹²⁸ The regimes control resale price by means of a deed restriction on each inclusionary unit.¹²⁹

Like the set-aside, the density bonus can take a variety of forms. Actually, "density" encompasses but a few of the possible changes. Significant cost savings can result from the retraction of many exclusionary zoning requirements: lot-size, square-footage threshold, set-back distance, number of bedrooms, housing material, plumbing standards, or the width of access roads and sidewalks.¹³⁰ Additionally, "bonus" includes the non-use of the suburb's power to proscribe even those projects that technically meet the letter of the local zoning laws.¹³¹ In the analysis that follows, "density bonus" must be read in a broad sense as any increase in the feasible number of units (because of cost savings or otherwise) over the number of units that the jurisdiction would otherwise allow.¹³²

126. The *Mt. Laurel* system has been codified as the New Jersey Fair Housing Act. N.J. STAT. ANN. §§ 52:27D-301 to -329 (West 1986 & Supp. 1996). But see Rachel Fox, *The Selling Out of Mount Laurel: Regional Contribution Agreements in New Jersey's Fair Housing Act*, 16 FORDHAM URB. L. J. 572 (1988) (arguing that the Act represents only a watered-down version of the *Mt. Laurel* court's mandate).

127. See Padilla, *supra* note 125, at 559.

128. Early drafts of the California proposal included a requirement that the inclusionary units have the "exterior appearance" of full-price units. Padilla, *supra* note 125, at 562.

129. The deed restriction is sometimes necessary to keep the units in the affordable stock. See Mallach, *supra* note 121, at 226-44.

130. Ellickson cites an Orange County ordinance that allows the developer to pick any two of a long list of exceptions. *Irony*, *supra* note 5, at 1180.

131. The tendency of jurisdictions to stall certain development activity merely by being uncooperative is, unfortunately, not quantifiable. Its economic effects parallel those of other growth controls.

132. Naturally, recalcitrant jurisdictions need to be policed to ensure that bonuses are given in practice as well as on paper.

A similar type of Regime Two intervention, one that the State of Oregon has used for the last twenty years, has the innocuous title of "Growth Management." Under Oregon's plan, communities near large cities have power to zone only within certain parameters set by a state planning commission.¹³³ The state commission requires a part of the available residential space in each community to be set aside for high-density use, often regardless of profitability. A developer wishing to build must accept this mandatory density bonus, or develop elsewhere. The Oregon system differs from most California systems and the *Mt. Laurel* system in that it uses density as a proxy for resident income and does not control the resale price of the inclusionary stock.¹³⁴ Because the Oregon system does not regulate who can live in the units it creates, it is more similar to the builder's remedy than to other sorts of inclusionary programs and does not provide a significant subsidy to the buying power of the poor. The Oregon system, however, is a departure from what would be the free market choice of developers. It requires them to build more densely than they would like, and to orient their production to a class of consumers whom they otherwise would not serve.

1. *Impact on the Supply of Housing*

The critical fact about Regime Two is that its economic consequences are identical to those of the voluntary set-aside program whenever the builder profits from the density bonus. In the vast majority of specific cases where mandatory programs have been applied, developers have suffered no significant losses.¹³⁵

The following section does *not* compare Regime Two to the status quo of an exclusionary housing market, however. Regime One

133. See OR. REV. STAT. §§ 197.005-.860 (1995) (Comprehensive Land Use Planning Coordination). Washington has a state planning commission with similar powers. WASH. REV. CODE ANN. § 36.70A.110 (West 1991 & Supp. 1997). Florida has an informal system of encouraging local governments to comply with regional or state growth plans. See generally *Growth Management*, *supra* note 14, at 1137-39, 1144 (recommending that other states adopt plans like Oregon's).

134. Nor does Oregon set price ceilings or income requirements on the original sale of the units. Other growth management regimes might.

135. Most developers happily comply with Regime Two. New Jersey's *Mt. Laurel* program has found no shortage of builder enthusiasm. See *Growth Management*, *supra* note 14, at 1130 (N.J. actually relies on builders to enforce the fair-share system); "NIMBY" REPORT, *supra* note 9 (mandatory programs can be a "bonus to developers"); *Irony*, *supra* note 5, at 1180 (density bonuses "reduce the construction industry's political opposition"). But see *id.* at 1181 (citing a study commissioned by the California Building Industry Association, which found that developers would suffer losses under some contemporary California rules).

showed the benefits of freeing developers from supply restrictions. The following section shows the benefits of moving one step further and forcing developers, whether they like it or not, to build at higher densities. For this reason, the following section compares the effects of Regime Two with a perfect voluntary set-aside program (essentially a free market in housing). The goal is to show what happens when a jurisdiction continues down the inclusionary path and tries to squeeze as much subsidy as possible from suburban market forces, even at the cost of slowing some types of luxury construction.

Because it is a mandatory program, Regime Two may decrease the developer's short-run revenue—both by limiting sale price and by decreasing the exclusivity component of demand.¹³⁶ This potential loss of revenue is why developers sometimes oppose inclusionary programs as vociferously as existing homeowners. In turn, that loss in revenue may jeopardize the commitment of certain productive factors and affect supply. If the supply effect is large enough, the mandatory element of the inclusionary program can actually decrease the number of homes built.

It is important, however, not to overestimate this danger. For many reasons, only some of which an individual developer can predict, the drop in revenue may never occur. Furthermore, even if revenue does fall, the move from a voluntary to a mandatory set-aside program can still increase the stock of affordable housing by encouraging denser (cheaper) development than market forces alone ever could. The viability of the program, therefore, depends on which of these two opposite effects—increased density of settlement or the possibility of a general retraction in supply of productive factors—is likely to have a larger effect on the amount of affordable homes produced.

a. Supply Effect I: Settlement Density

The first step in measuring the supply effects of mandatory set-aside zoning is critical: choosing a measure of quantity. Ellickson recognizes that mandatory set-aside rules increase development density.¹³⁷ However, he sidesteps the *economic* consequences of

136. *Irony*, *supra* note 5, at 1181.

137. *Id.* at 1180 ("Most inclusionary ordinances entitle an inclusionary developer to build more dwelling units than the applicable zoning restrictions would otherwise allow. In other words, the inclusionary units may be, in whole or in part, add-on units that the developer would not have been able to build in the absence of the inclusionary program.").

higher density by picking a particular—if not peculiar—definition of the quantity of housing. *Irony* does not identify what “quantity” means, but Ellickson does refer to “standard house equivalents.”¹³⁸ “Standard house equivalent” is a means by which “dwelling units of various sizes and qualities can be aggregated together and discussed as a single market.”¹³⁹ Despite the name, “standard house equivalents” are not a measure of the number or physical characteristics of actual units. The term refers to the *market* value of whatever construction occurs, regardless of the number or type of constructed dwellings.¹⁴⁰ As Ellickson says, “a shack might count as one-quarter of a standard house equivalent, and a mansion as six.”¹⁴¹ At the values given, therefore, the “quantity” of housing *decreases* when twenty-three inexpensive homes are built instead of one mansion.

The tautological market definition of quantity seems doubly inappropriate for the task of deciding how much affordable housing an inclusionary program creates. First, the definition of quantity has an obvious income bias—and housing is a good that most believe should be distributed with some sympathy for the poor. Second, the market value definition of quantity is inappropriate because the stated goals of national housing policy provide a clear alternative: to increase the *number* of decent homes.

Ellickson, like most critics of inclusionary zoning, accepts this premise as a policy norm, but then ignores it in his economic analysis.¹⁴² A standard that simply measures the number of decent units has its own problem: it treats all livable homes as equal contributions to the national housing supply. This ignores differences in size, location, luxury and age. A better system—conceivable, but not necessary here—would combine the two measures. But gauging the quantity of housing services by number of units, at the very least, avoids mistaking the bidding wars of the wealthy for positive physical change.¹⁴³

138. Ellickson borrows the technique from Muth, *supra* note 95, at 32.

139. *Growth Controls*, *supra* note 18, at 393.

140. Muth, *supra* note 95, at 32.

141. *Growth Controls*, *supra* note 18, at 393.

142. It may be a legitimate law and economics position to claim that zoning rules should maximize the sale *value* of new construction, but that goal directly contradicts the stated purposes of inclusionary zoning rules. It cannot, therefore, be used to say that inclusionary rules hurt those they seek to help.

143. The Bureau of Economic Analysis of the Department of Commerce still measures housing growth in terms of value. The practice is criticized by many economists. The problem with this system of measurement is apparent whenever income effects or local scarcity bid up housing prices. In the 1970s, for instance, the Bureau concluded

Two examples show the problems of measuring the supply effects of an inclusionary zoning program by yardstick of the market value of the housing it creates. Assuming that a rule is passed that causes triplexes, instead of mansions, to be built on two-acre lots, what will happen to the "quantity" of housing? The answer is that quantity will decrease, if a triplex sells for less than the mansion, or increase, if it sells for more. In an area where the wealthy can outbid the poor, mansions will sell for more. By the definition above, then, the quantity of housing is said to *decrease* when a move is made from one mansion to one triplex. That decrease occurs despite the higher number of units, and despite the fact that the triplexes use more productive inputs (with land use remaining constant, but with more construction hours going into an equally priced triplex). Under such a system it is, by definition, improbable that the construction of *affordable* housing will ever increase supply.

Now say we assume, holding everything else constant, that builders discover a new way to run a multi-family sewer line and save \$1000 per unit in costs whenever they build multi-family housing. These cost savings make builders more willing to supply multi-family housing at a given price, and quantity increases. Given a normal demand curve, the price falls. But as the price falls—relative to the type of housing for which the innovation wasn't applicable—the quantity of standard house equivalents that the builders supply falls as well. This discounting of the cost savings from type-specific innovation is more than a theoretical fault. Higher-density building results in significant cost savings per unit—not only from the use of less land, but also from economies of scale. These economies of scale are *systematically* trivialized by a measure of quantity

that gross investment in housing increased 2.8% per annum. Gross investment includes new construction, renovation and maintenance expenditures: in short, any positive contributions to the physical stock. The Bureau then concluded that net investment in housing increased 2.9% per annum. Net investment is gross investment *minus* demolition and depreciation. See POZDENA, *supra* note 87, at 38-39. How could net investment be greater than gross investment? The answer lies in the increased demand for housing generally—old and new—that raised the prices of all units, even those not undergoing construction. Greater market demand translated directly into greater "supply."

The political advantage of such a system of measurement during years of average real income growth (but increasing income disparity) is obvious. Bidding wars among the wealthy can have a supply effect even if physical growth is minimal; and the stock's market value increases faster than its ability to provide housing services. The annual rate of change in the net physical stock of housing units over the relevant time period was only 2.2%, nearly 20% less than net "investment" of 2.9%. See *id.* at 39.

that looks to price effect rather than the additional building activity that the cost savings facilitate.

The recognition that the quantity of *units* per development increases under inclusionary zoning rules calls into question Ellickson's statements about the efficacy of the filtering model. Ellickson claims that the poor benefit *equally* from the construction of any given "standard house equivalent."¹⁴⁴

[F]iltering benefits . . . tend to equal the benefits the less wealthy would receive from new construction of moderate-income housing. Suppose that market forces at work in a city are leading to the production of luxury housing on the city's few remaining vacant tracts. Nevertheless, the city arranges for the construction of subsidized housing units on those sites. This might result in some short-run benefits for moderate-income families. In the long run, however, the city's provision of these low- and moderate-income units would tend to reduce the number of similar units produced through the filtering process. . . . [W]hatever steps government takes to shape the quality mix of new housing will tend to be offset in the long run by opposite changes in the stock of used housing.¹⁴⁵

Ellickson's conclusion is wrong because it ignores the difference between the supply of "standard house equivalents" and the quantity of real units. If inclusionary units in the hypothetical city are built at higher density than luxury units, then the city's policy can influence the stock of affordable housing dramatically. The luxury housing for which Ellickson argues would include fewer units, say twenty mansions instead of forty cheap condominiums. Foregoing the luxury housing will still result in the loss of twenty filter-vacancies—but forty units will have been built instead. Measured in units, the city's stock doubles!

Ellickson's approach would be justified if the switch from a low- to high-density use was costless. If there were no conversion costs, then a home worth \$100,000 might provide the equivalent shelter of two homes worth \$50,000. But conversion costs are considerable. In fact, the only way to transform most luxury, single-family stock into multi-family housing is to raze it and start from

144. He is not alone: "The filter down process provides higher quality housing for the poor than can be provided by construction of new houses for them." EDWIN S. MILLS, *URBAN ECONOMICS* 123 (2d ed. 1980) (emphasis omitted). Fischel makes the same mistake: "The growth that is allowed as a result of inclusionary zoning . . . is smaller than the increase in housing units that would have been obtained under zoning that allowed only the usual single-family units." FISCHEL, *supra* note 7, at 329.

145. *Irony, supra* note 5, at 1187.

scratch.¹⁴⁶ A stock of buildings built for the rich is of little help to a nation that wants to house its poor. This point will be developed later during the more detailed discussion of the filtering process in the analysis of Regime Three. For now it is enough to recognize that *the filtering process, even when functioning perfectly, merely allocates the housing stock—it cannot significantly change the character of the stock or the number of units that the stock can support.*

Now that we have an appropriate definition of quantity, it is useful to reconsider, in figures 4 and 5, Ellickson's analysis of the supply effects of an inclusionary zoning intervention, as reflected in his original graphs. Ellickson says quantity moves to Q_2 , price to P_2 . The new equilibrium point at E_2 represents a dead weight loss corresponding to the triangle below E_1 - E_2 .

The necessary change in the value of the x-axis, however, has dramatic effects, even assuming that Ellickson's "tax" theory is legitimate, as shown in figure 5. Quantity moves to Q_3 , price to P_3 . The new equilibrium at E_3 represents a dead weight *gain* corresponding to the triangle below E_1 - E_3 .¹⁴⁷ The graph, of course, assumes that the density bonus shifts the supply curve more to the right than the "tax" shifted it to the left. Why any other result is highly improbable is discussed immediately below.

b. Supply Effect II: Factor Exit?

The move from a voluntary program to Regime Two will cause no bad, inward shift of the supply curve (E_1 to E_2 on Ellickson's graph) unless the cost of providing the inclusionary units is greater than the additional revenue that the developer is able to capture. The increase in the density of settlement (and volume of units sold)

146. The doubling or tripling up of families is certainly possible (witness Boston), but space and money are wasted by large homes unfit for their present uses. Economists make the distinction between the supply of housing structures ("stock") and the supply of housing services ("flow"). Phrased in this language, *stock* built for the wealthy cannot provide the *services* the poor need.

147. This is a little dishonest. The change results in dead weight gain only if one posits that the demand curve does not fall. However, the demand curve will fall because of the higher density of settlement. Since we are comparing Regime Two to a hypothetical market (as was Ellickson), the dead weight loss of the change in demand should *exceed* the dead weight gain of the change in unit supply. Exactly how this works is easy to conceptualize. The dead weight gain is reaped by the marginal buyers and suppliers of new inclusionary units, as the graph depicts. The dead weight loss is suffered by the consumers and producers who would otherwise buy and sell luxury units—the inclusionary rule sets onerous conditions on the deal they otherwise would have struck. The move from a free market (perfect voluntary set-aside program) to Regime Two is therefore "inefficient," even though it increases the supply in terms of the number of homes.

Figure 4: Ellickson's Graph of Construction Tax Imposed Without Perfect Substitutes

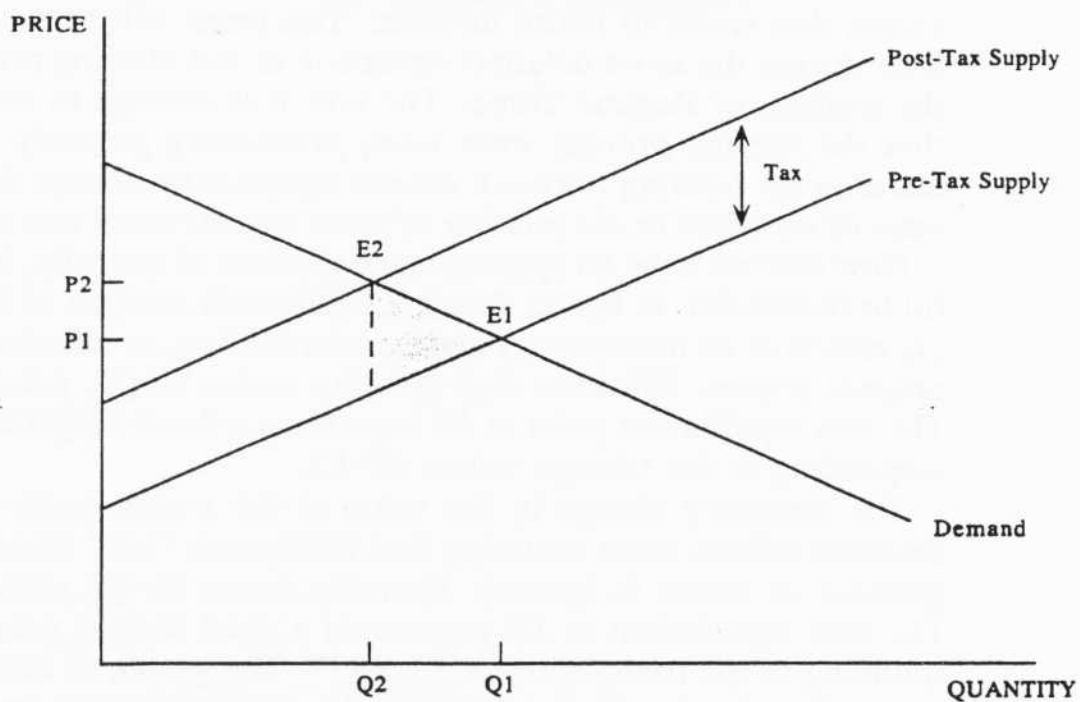
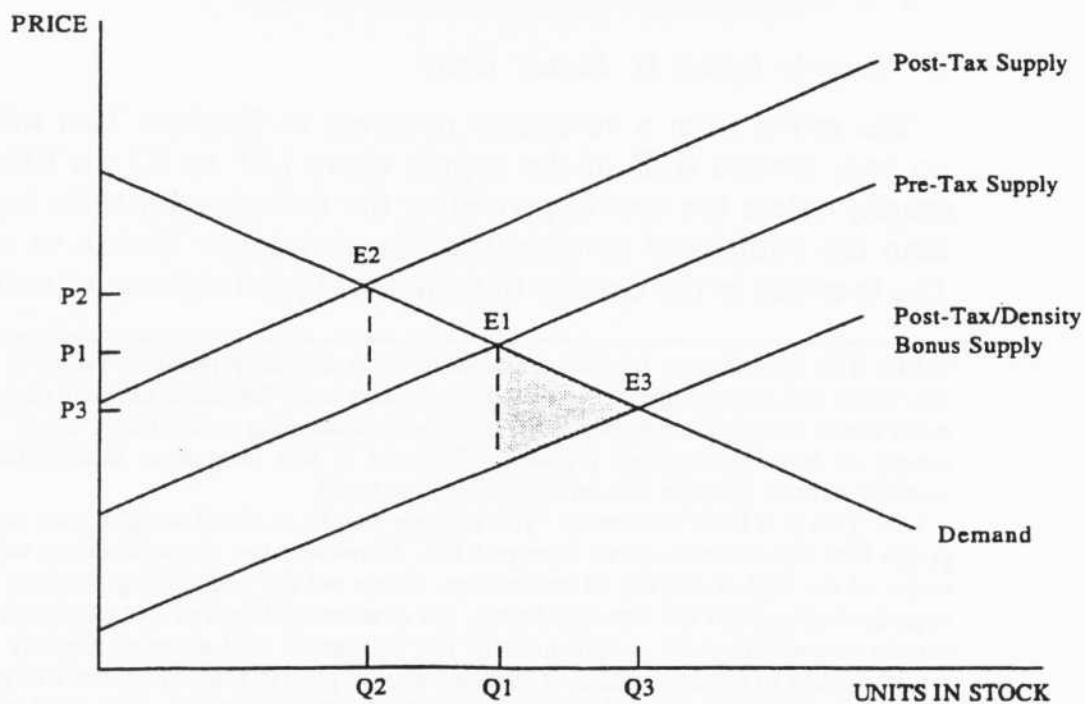


Figure 5: Ellickson's Graph Revisited



is itself a significant source of revenue. This increase drives the voluntary set-aside program described above. However, a proponent of a mandatory regime must address situations where the inclusionary units cannot be sold at a price that covers the current costs of their construction. The difference between sales price and cost of construction will vary with the market and the size of the inclusionary "burden" that the jurisdiction chooses to impose.¹⁴⁸ Whether the shortfall occurs, continues to occur, or causes the exit of productive factors, depends on the following considerations.

(i) Costs of Construction

The significant cost savings of higher-density construction were explained in the discussion of Regime One. If one assumes that the market correctly evaluates the potential of these cost savings, then the move from a voluntary set-aside program to a mandatory set-aside one will not create cost savings greater than short-run revenue losses. However, there are a few simple market-failure arguments that suggest that the cost-savings created by the mandatory regime may be greater than superficial analysis (or even developer lobbying) suggests.

First, until now we have assumed that the developer is motivated solely by the desire to maximize profits on the particular development that he or she is considering. Such simple motivations are seldom the entire story. Part of the developer's value on the market is his or her reputation in the community and ability to deal with local officials. If a developer decides to build low income units in a traditionally highbrow neighborhood, the developer is likely to lose the goodwill of officials who represent area residents, decreasing the developer's ability to lure future buyers and win concessions from the jurisdiction. The latter loss is particularly devastating—even for developers who are not repeat players—because local jurisdictions have many ways to sap money from developers whose projects they do not like. The prospect of losing local goodwill causes the rational developer to *internalize* part of the illegitimate components of the Exclusivity Premium (including local residents' cartel profits, tax advantages, and fears about potential residents). There will be, therefore, a category of very profitable,

148. The revenue loss depends chiefly on the price of the inclusionary units. Versions of Regime Two that do not control the sale price of the units have an obvious advantage.

but very troublesome projects that the developer will not attempt.¹⁴⁹

Second, we have looked at the developers' costs only at a specific time, and with existing techniques and technology. However, multi-family housing construction is marked by a "learning-curve" that may pay off exponentially as more developers are *forced* to construct multi-family units, pooling technological and design gains as they go.¹⁵⁰ The learning curve for multi-family development is more significant than the learning curve for an equal amount of single-family development.¹⁵¹ The standard reply to this argument says that the developers already understand the possibility of learning curve growth and predict costs accordingly. That reply ignores the prisoner's dilemma inherent in the developers' situation. Even if huge, industry-wide cost savings could be reaped by learning-curve innovations, the individual developers would not invest adequately in new solutions. The developer who decides to write off costs as research and experimentation will reap only some of the future benefits (a percentage equal to market share), but will have paid the entire costs of discovery. Under those conditions, a group of individual, rational developers will build according to existing technology rather than move together to a more efficient level.¹⁵² If the assumption of pure profit motivation is dropped, the rut of current development technology is deepened by habit, culture, peer socialization, and the economics of small firm specialization.¹⁵³

149. The cost of overcoming neighborhood opposition will still exist in an inclusionary regime. The developer may be helped, however, by the fact that he or she did not choose to build the new inclusionary units and is merely complying with the law.

150. Few construction firms have tried multi-family construction. Large builders (the 18% of builders responsible for 80% of housing starts) build "virtually all" new multi-family units. Robert H. Kuehn, Jr., *The Homebuilding Industry: What Will it Take to Produce More Affordable Housing?* 20 (1988) (unpublished paper on file with the MIT Center for Real Estate Dev.).

151. Multi-family dwelling happens in bigger buildings in more need of construction technology and design; it provides a huge range of possibilities for the synergistic combination of living spaces.

152. Productivity growth in construction averages about 1.5% a year, well below mean productivity growth in other industries. See POZDENA, *supra* note 87, at 55. The construction industry, although large, is characterized by highly atomistic firms and is extremely competitive. Basically good for consumers, this competitiveness does make it difficult for the construction industry to fund and implement technological and design advances.

153. Advances in cost savings might be spurred by public sector coordination of research efforts. For current attempts at national coordination, see *Affordable Housing and Construction R&D: Hearing Before the Subcomm. on Tech., Env't. and Aviation of the House Comm. on Science, Space, and Tech.*, 103d Cong., 1st Sess. (1993).

The long term costs of the "inclusionary burden" therefore are mitigated by the proportion of supposed losses that are: (1) illusory replacements for illegitimate costs of local goodwill; or (2) short term costs that will disappear with the increased use of construction technology and good design.

(ii) Costs Passed on to Consumers

If Regime Two increases developers' costs, developers will try to pass on part of their losses to buyers of non-inclusionary units. The developers' ability to pass on costs depends on the elasticity of demand.¹⁵⁴ When demand is elastic—i.e., there are a variety of alternative suburban sites offering comparably-priced homes, and consumers are indifferent between the various suburbs—the developer will not be able to increase prices. However, when the community has special resources, access or charm, the developer will be able to pass on almost the entire cost of the inclusionary rules. In these jurisdictions, "stuck" home buyers suffer a loss in welfare, but the developers will not lose money, and there will be little or no negative change in the supply of housing.¹⁵⁵

One way to *ensure* inelastic demand is to impose Regime Two on an entire metropolitan area, rather than just a few suburbs. Demand for larger areas is considerably less elastic than the demand for smaller ones. A consumer with a taste for large lots can escape a suburban price increase by moving to another suburb. A consumer with a taste for large lots can escape a regional price increase only by moving to another city, or buying less housing and more other goods.¹⁵⁶

(iii) Supply of Inputs

A Regime Two intervention that operates against an *elastic* demand curve will force developers not operating at a substantial profit to cut costs or exit. Developers can cut costs either by getting more efficient, as discussed above, or by paying less for factors of production. If developers in a jurisdiction are making large

154. The elasticity of demand can be broken into income and substitution effects. The income effect refers to a home buyer's ability to pay. The substitution effect is a buyer's readiness to purchase alternatives. Only the latter is affected by inclusionary reform.

155. As explained below in the discussion of Regime Three, a price ceiling on the inclusionary units and the resulting ability to price discriminate might increase profits on non-inclusionary units enough to render the mandatory regime even more profitable than the voluntary set-aside program.

156. See POZDENA, *supra* note 87, at 22-25.

profits—which will mostly depend on entry barriers—the decrease in revenue may simply be absorbed.¹⁵⁷

Of the three main factors of production—builders, materials, and land—the supply of land is least elastic.¹⁵⁸ As the suppliers of the least elastic factor of production, land owners will pay the lion's share of whatever supply-side losses the inclusionary system creates.¹⁵⁹ When bidding on land, developers will lower their bids to adjust for the costs of inclusionary obligations.¹⁶⁰ Landowners, unless they can orchestrate a collective holdout, will be forced to sell at the offered price or find some other use.¹⁶¹ A decrease in the supply of land will be unlikely, given the inelasticity of the supply curve for land, and the relatively small burden imposed by the typical inclusionary regime.¹⁶²

c. *Aggregating the Supply Effects*

The move from a voluntary program to Regime Two will decrease the number of units in the housing stock only when the stock gains caused by higher settlement density are outweighed by the stock losses caused by factor exit. Factor exit will occur only if the developers can neither absorb costs nor pass them on to con-

157. The building industry as a whole is not characterized by significant entry barriers according to Muth, *supra* note 95, at 44-45 (construction firms are not characterized by highly cyclical profits; entry is easier than in most other industries). Particular builders with local connections, however, may be able to carve themselves a protected niche. Cf. MALLACH, *supra* note 7, at 94 (describing the limits on developer's interjurisdictional mobility). Generally, profits are volatile and the development business is risky. *Id.* at 87.

158. Ellickson's economic analysis assumes that all supply factors besides land are perfectly elastic, but that the supply of land is "neither infinitely elastic (because sites are limited), nor infinitely inelastic (because landowners can use their land for farming or other nonhousing uses)." *Irony*, *supra* note 5, at 1188 n.94. See also *Growth Controls*, *supra* note 16, at 401.

159. Landowners do not take any significant costs into account when deciding how much land to "produce"—their profits are pure economic rent. The price they can command is determined by strategic and speculative market behavior—and their power in this regard is limited by the difficulties of price coordination, the existence of alternative areas, and the developer's ability to substitute improvements for land. See POZDENA, *supra* note 87, at 50-52.

160. *Irony*, *supra* note 5, at 1190.

161. Other possible alternative uses are unlikely to be as commonly demanded (industry) or as profitable (learning to ride horses).

162. One author fine-tunes the standard analysis by presenting two types of jurisdictions. In the first, the supply of developable land is in only a few hands. The small group of landholders may be in a position to avoid pass-through by coordinating their bidding behavior. In the second type of jurisdiction, landholders are many—or the developers themselves have acquired reserves of land—and the developer will be able to pass-through costs almost at will. See MALLACH, *supra* note 7, at 90.

sumers or landowners. The tendency to overestimate the costs of inclusion, the possibility of elastic demand, and the near certainty of inelastic supply of land all indicate that situations where stock loss is greater than stock gain will be extremely rare. Even when such a danger exists, Regime Two can adjust by fine-tuning the following variables: (1) the ratio of inclusionary to non-inclusionary units; (2) the size of the density bonus; (3) the existence and level of price controls; and (4) the scale of intervention (regional vs. local). Any area with reasonably strong demand should be able to ensure gains in the housing stock by manipulating these variables appropriately.¹⁶³

The only real risk that the move from a voluntary to a mandatory program will harm the housing market arises from a possible drop in consumer demand. High density units may cause a decline in the desirability of the suburb among wealthier buyers. As mentioned above, this problem is only significant if the inclusionary rules are very unpopular among wealthy buyers and apply to few jurisdictions in the suburban area. If Regime Two is passed for an entire region, the drop in the Exclusivity Premium should have less effect on price. In any event, developers can mitigate the loss of the Exclusivity Premium by good design or by segregating the development into high and low density areas. If all of these safeguards fail, the region can simply relax the inclusionary obligations or move toward a voluntary system—without having suffered any long term loss as a result of its experimentation.

A similar problem might develop if the price ceiling is set too low to adequately cover the costs that the developer cannot pass through.¹⁶⁴ The price ceiling's permissible height—or the market price of the inclusionary units under a system without price controls—depends on the buying power of the target population.¹⁶⁵ If buying power is inadequate, one solution is to secure public funding to account for the difference between the target population's ability to pay and the minimal total revenue needed to avoid the

163. I assume that the manipulator is reasonably capable, and motivated by regional, rather than purely parochial, concerns.

164. If we hypothesize that the pre-inclusionary market was at equilibrium and the supply curve is not sticky, the quantity of housing demanded is inadequate to support the current level of production inputs whenever the inclusionary regime curtails any of the developer's total revenue. The question here is different, however. We are concerned with whether demand is adequate to keep the exit of supply factors from offsetting most or all of the gains from higher settlement density.

165. The elasticity of demand among the poor, like the elasticity of demand among the wealthy, has price and income elements.

exit of productive factors. The other solution is to raise or eliminate the price ceiling. In this regard, the major criticism of inclusionary programs that do *not* set price controls—that they help middle-income persons directly and the poor only through filtering—is a strength. By targeting the middle-income as potential buyers, such programs avoid revenue problems and still increase the total stock.

2. *Winners and Losers Under Regime Two*

a. *Existing Homeowners*

Under the voluntary set-aside program, existing homeowners lost part of their Exclusivity Premium. In the move from the voluntary set-aside program to Regime Two, they will lose more of it if Regime Two results in a greater number of units, or units for persons with lower incomes.

The move from the voluntary set-aside program to Regime Two can decrease *or increase* the cartel profits of existing homeowners. On the one hand, mandatory high density construction will cause a general increase in the number of units on the market. On the other hand, the new stock will be of a type that may not compete directly with existing homes.¹⁶⁶ If the inclusionary burden is large, or there is factor exit, the number of *competing* new units could decrease—even as the number of total units rises. The resulting lack of competing houses would raise the resale value of the existing homes in jurisdictions where demand is somewhat elastic (especially if Regime Two is imposed on an entire region).

This ability to capture cartel rent is one reason why homeowners in areas where the demand curve is very inelastic sometimes favor mandatory set-aside programs, even while vigorously opposing voluntary ones. Such homeowners may see their property values rise under Regime Two, even if they are not especially fond of their new neighbors. On the other hand, in areas where the Exclusivity Premium is high but the demand curve is elastic because of substitutes, homeowners will resist both Regime One and Regime Two. Such homeowners will suffer the loss of Exclusivity Premium but will not have the market power to reap cartel profits from a restriction of competing new construction. As a general matter, therefore, one can expect that homeowners (to the extent they worry about the resale value of their home) will offer less resistance to a

166. Assuming there is some difference in taste between high-end and low-end purchasers.

regional inclusionary zoning intervention than to a local one, because a regional intervention promises a less elastic demand curve.

b. Owners of Undeveloped Land

Under a voluntary set-aside program, owners of undeveloped land benefitted when more efficient use of their fixed resource brought higher prices. Under Regime Two, their welfare depends on how much of the inclusionary activity is actually profitable. If the developer's total revenue falls (because costs are high and/or demand elastic), the owners of undeveloped land will see a drop in price. The landowners will be able to resist the drop in price only if they are highly organized or if industrial, agricultural, or recreational uses are extremely profitable. In most areas, landowners will bear the brunt of any drop in developer revenue. For this reason, one can expect landowners to favor a move from an exclusionary system to the voluntary set-aside program, but to resist the move from a voluntary to a mandatory program (which means that their interests are precisely opposite those of homeowners in communities without market substitutes).

c. Buyers of Non-Inclusionary Units

Under the voluntary set-aside program, buyers with preferences for large lots saw a slight increase in prices because their tastes for space were no longer subsidized by large-lot zoning. To the extent that demand is inelastic, their situation is considerably worse under Regime Two. If demand is inelastic (because the community has special characteristics or the intervention affects an entire region) the price of large lots will likely rise as developers pass on to market consumers the cost of building inclusionary units (to the extent such cost is not borne by land owners). Even if the price of large lots falls or remains the same (because the shift in demand caused by loss of the Exclusivity Premium has a bigger price effect than the drop in supply), large lot buyers lose some of the Exclusivity Premium that otherwise would come with a new home.

If demand is elastic and the intervention local, buyers should break even. The bargaining position of the buyers will force developers to pass losses on to land owners, or to absorb the losses themselves. The price of new homes may fall because of lost Exclusivity Premium, but that substitution has not made the buyers better off because the buyers receive less for their money (i.e., less Exclusivity Premium). It is true that communities with elastic demand curves face the possibility that land owners or developers

will exit. Exit on the supply side would mean an increase in prices. However, if demand is truly inelastic, the extent of exit and the magnitude of the resulting price change will be minimal.

The situation is more complex and interesting if non-inclusionary buyers in an elastic market are divided into groups, according to their subjective valuations of the second (prestige/prejudice) component of the Exclusivity Premium.¹⁶⁷ Buyers whose subjective valuations of exclusiveness are greater than the market's (roughly the average) are losers under Regime Two, because the drop in exclusivity is more important to them than the drop in price. On the other hand, buyers whose subjective valuations of exclusiveness are less than the market's are winners, because the drop in price is more important to them than the drop in exclusivity. Regime Two, imposed under conditions of an elastic demand curve, thus represents a transfer of wealth—and I mean this quite seriously—from snobs and racists to the more open-minded.

d. Buyers of Inclusionary Units

Obviously, those who receive inclusionary units benefit in the same manner as under the voluntary set-aside program. However, the number of set-aside units will likely be larger under the mandatory regime, because some part of the value of developable land or the demand for large lots is used as a source of subsidy to low income residents. Thus, the program will be able to benefit a greater number of the poor, or provide the same number of poor with a deeper subsidy. Of course, like the voluntary set-aside program, the mandatory program is open to the criticism that it gives an in-kind subsidy rather than cash.

A regime without price controls, like Oregon's growth management regime, avoids the in-kind subsidy problem. The price of the inclusionary units can be as high as market demand allows.¹⁶⁸ The hybrid, however, is not as helpful to poorer consumers. First, the wealth transfer it creates will be slight unless the government pro-

167. A similar method might divide buyers, according to the first prong of the Exclusivity Premium, based upon how much they stand to gain from high levels of public expenditure.

168. Why the hybrid avoids criticism as Kaldor-Hicks inefficient is more a matter of economic culture than logic. Technically, the hybrid is also inefficient if the market value of the parcel at high-density is less than the market value of the parcel at low-density. The high-density users would like to sell the power to determine density to wealthier buyers, taking a portion of the wealthy buyers' surplus, but the rule change to high-density forbids such transactions. Forbidding the transaction might be Kaldor-Hicks efficient if persons other than the parties to the transaction would be harmed; the same can be said for the in-kind subsidy.

vides significant subsidies. Second, the units will be purchased by buyers with moderate incomes, and the poor will be helped only indirectly, through filtering. Finally, if not imposed on the entire jurisdiction, the hybrid risks falling victim to its own success—an increase in affordable housing can lure buyers from other places, and possibly bid up prices to their pre-intervention level.

e. Public Administrative Costs

There are two types of administrative costs generated by Regime Two. First, a government agency, usually the state or regional government, must develop a plan, and ensure that local jurisdictions and developers implement it faithfully. Monitoring has not proven difficult, largely because some local party is usually angry enough to bring a potential violation to the attention of the regional organization. More time and effort has been spent arguing about the appropriate level of inclusionary obligations, and remedies for its disregard.¹⁶⁹

If the system imposes price controls on the inclusionary units, there are additional monitoring costs. Typically, Regime Two interventions set up organizations to control the resale price, and recover windfall profits at the end of the price-ceiling period. The costs of running these organizations, which are not excessive,¹⁷⁰ can be covered during times of increasing housing prices, by appropriation of a percentage of the resale profits.¹⁷¹

3. Effects of Regime Two: Running Summary

The move from Regime One to Regime Two—and from a voluntary to a mandatory program generally—will increase the number of affordable units in the housing stock whenever the inclusionary obligations of the developer are not extreme and there is adequate demand for high density housing. Although total developer revenue may decrease, little of this loss will be borne by the developers themselves. The developers will shift the new costs to two groups of people, in amounts that depend upon the elasticities of consumer demand and the supply of land. Buyers of non-inclusionary units may pay more and/or get less. Owners of undeveloped land

169. The political history of New Jersey's inclusionary zoning system is described generally in Fox, *supra* note 126.

170. The New Jersey resale control process is run by one full-time manager with part-time secretarial support at an annual cost of \$60,000 (about \$100 per annum per inclusionary unit). Mallach, *supra* note 121, at 232.

171. *Id.* at 232-39.

may see a drop in sale price. As long as developer revenue does not fall too far, neither of these costs will lead to a significant retraction of supply. Dangerous drops in total revenue appear likely only when programs insist on setting a low income ceiling, and do not provide adequate public subsidies to make production of the inclusionary units profitable.

"Growth Management" systems that do not impose price controls on the inclusionary units will have a smaller negative effect on builder revenue, regardless of the elasticity of the demand curves. Such regimes are an excellent method of increasing the total housing stock in jurisdictions where demand among the class of people that the program seeks to help is fairly strong. However, a regime without price controls cannot effectively redistribute wealth. Nor can it target a particular income group. For Ellickson, this shortcoming defeats the purpose of such inclusionary regimes which cannot directly provide housing for the very poor.¹⁷² What he misses is the increased filtering of units to the poor brought about by: (1) the shortening of the filter chain as moderate-income families (rather than wealthy ones) move into new units; and (2) the increased density of construction, which creates more units, and units of a type more useful to the poor.

C. Regime Three: Mandatory Set-Asides Without Density Bonuses

Regime Three looks like a housing economist's nightmare. It requires developers to set aside a percentage of any new development for rent or sale at a fixed price, but gives them no density bonuses or other concessions. There is no per-unit cost savings, only an obvious loss in revenue. The supply curve should move in only one direction: back. The price of non-inclusionary housing should increase. Factors of production should exit. The inclusionary tenants should overconsume housing and depart from Pareto optimality. And huge surpluses should be bestowed on a random collection of happy, low-income winners, while the majority of the poor sink deeper into shelter poverty.

No jurisdiction has ever tried to implement Regime Three.¹⁷³ Yet Regime Three, because there is no change in density, is exactly the scenario in which Ellickson's analysis would best apply. The

172. *Irony*, *supra* note 5, at 1192-94.

173. There is the possibility that an unmonitored jurisdiction that *says* it is applying Regime Two may, by not actually giving density bonuses, in effect be applying Regime Three.

final section below examines this hypothetical nightmare regime, and shows that even it can increase the stock of affordable housing. The economic effects of Regime Three will also shed light on key elements of the previous two regimes, mentioned earlier, but not fully described: price discrimination and Filter Loss. These two factors are at work in *any* inclusionary program, and help explain why inclusionary programs are far more efficacious than law and economics has thought. Like the section about Regime Two, the following section compares Regime Three to a free market in housing.

1. *Impacts on Low Income Housing Stock*

Regime Three is not "efficient" according to any classic micro-economic test. However, the main criticism of Regime Three, that it hurts the very persons whom it intends to help, is not supportable. In most markets, Regime Three can provide more affordable housing than a system allocating new units to the highest bidder.

a. *A Housing Supply Equation*

Pre-intervention, the growth in the stock of affordable housing depends on the number of new, market-rate units, and how many of these units filter down to reach the target population.¹⁷⁴ After a Regime Three intervention, the growth in the stock of affordable housing comes from two sources. One source continues to be new market stock that filters down. The amount of new market stock is likely to be less than that built before the intervention because developers must bear the cost of the inclusionary units. The other source of affordable stock is the set-aside.

For any mandatory inclusionary program trying to help the poor, the crucial question is whether the loss in filtered-down market stock will be bigger or smaller than the set-aside. For the mathematically inclined, the question can be phrased as an equation.

$$(\Delta P * \eta S) * f + S_i <?> 0$$

ΔP is percentage change in average sale price of new units, including both inclusionary and market-rate units. The reader can assume (momentarily) that the change is negative (average price falls). ηS is the price elasticity of supply of new units, or the slope of the supply curve. It is the long-run response (measured in change in number of units actually built) to the loss in short-run

174. The new housing itself doesn't actually filter; it simply causes filter moves. But the image is useful.

revenue, ΔP .¹⁷⁵ f is the Filter Rate, the chance that an additional unit of new market stock will result in an equivalent gain in stock available to the target population. S_i represents the number of units in the set-aside.

The equation is easy to apply. If the intervention decreases builder revenue by 20%, and the price elasticity of supply is 0.5, then the number of new luxury units built will decrease by 10%. Imagine that means 900 units are built instead of 1000, resulting in a loss of 100 units. If the Filter Rate is 0.8 (such that 80% of stock growth translates into stock growth for the target population), then 80 units have been lost. If the set-aside provides more than 80 units, the intervention is warranted. If it provides fewer than 80, the intervention is not. Of course, these numbers are only hypothetical. If the drop in builder revenue is 40%, then 200 luxury units will be lost, 160 of which would have benefitted the poor. This means that the set-aside (S_i) must be larger than 160 for the intervention to make sense.

The jurisdiction implementing the Regime Three program picks the exact size of the set-aside (S_i). The values of the other three variables (ΔP , ηS , and f) are more difficult to determine in a given situation. This difficulty does not mean that Regime Three is inadvisable in most circumstances. On the contrary, there is an easily discernible class of situations in which Regime Three will almost always increase the supply of affordable homes. The following analysis identifies these circumstances, and shows that the preconditions for a successful Regime Three intervention are surprisingly common.

*b. Causes and Magnitude of Supply Shift ($\Delta P * \eta S$)*

(i) Developer's Short-Run Revenue (ΔP)

Since Regime Three holds density per development constant, it will shift back the supply curve, regardless of how supply is measured, if it decreases the total revenue of developers. That result is by no means certain—and there are situations in which the opposite may occur. At the very least, Ellickson has not taken into account one factor that mitigates the builders' losses in all jurisdictions where demand is not perfectly elastic: price discrimination.

175. Actually, to make the terms work, the price elasticity of supply must be multiplied by the number of units built before the intervention. Calling the pre-intervention supply S , the more accurate equation is: $(\Delta P * \eta S * S) * f + S_i <?> 0$.

The change in developers' revenue at a fixed level of production depends on only three factors. Two are controlled by the jurisdiction: the proportion of inclusionary to market-price units, and the price of the inclusionary units. The third factor is beyond the jurisdiction's control—but nevertheless predictable: the slope of the total demand curve for residential units in the jurisdiction. The change in developers' revenue is illustrated by the three graphs which follow. The graphs depict total, short-run revenue from the market-price units (figure 6), the inclusionary units (figure 7), and all units together (figure 8).¹⁷⁶

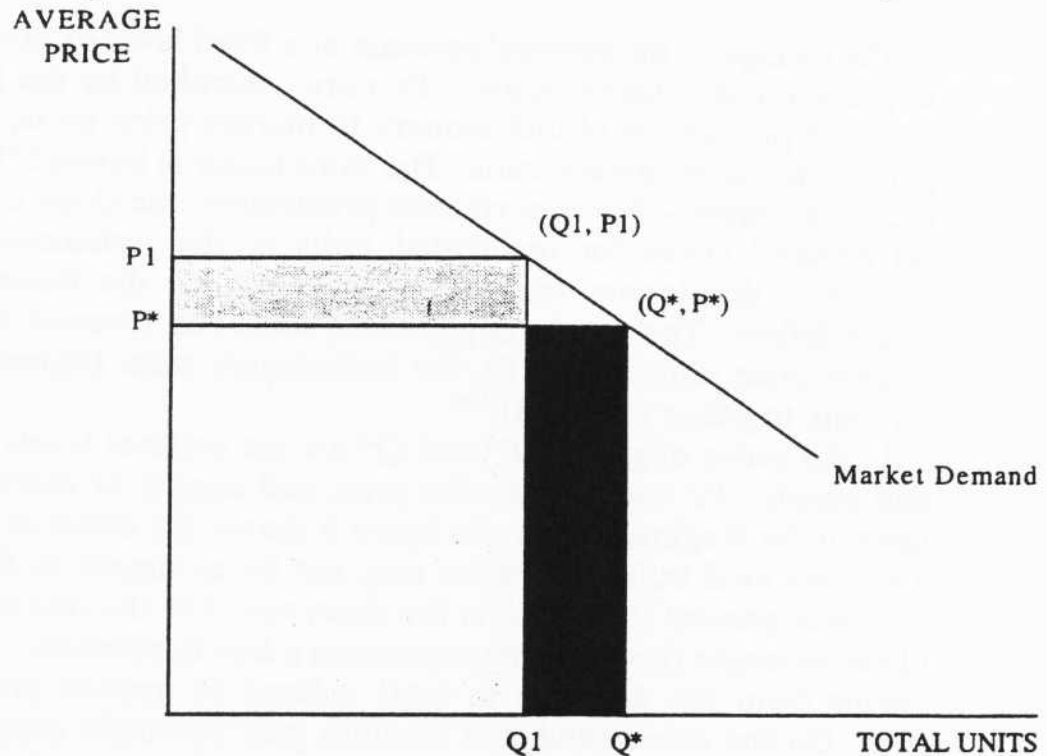
In this series of graphs, P^* and Q^* are the original levels of price and supply; $P1$ and $Q1$ are the price and supply of market-price units under Regime Three. As figure 6 shows, the effect of Regime Three on total builder revenue may not be as simple as Ellickson or others present it, at least in the short run. On the one hand, the black rectangle (lower right) represents a *loss* in revenue. This loss results from the decrease in total volume of market price units sold. On the other hand, the medium grey rectangle (upper left), represents *gain* in revenue. This gain results from the developer's ability to raise unit price as the quantity sold decreases (by Q^*-Q1). It is important to realize that this revenue gain could not be achieved under a voluntary regime unless the builders were able to coordinate price discrimination.¹⁷⁷

Whether the rectangle representing revenue loss is bigger than the rectangle representing revenue gain (or vice-versa) will depend on the slope of the demand curve between the relevant points ($Q1$, $P1$ and Q^* , P^*). If demand is elastic (the jurisdiction has no special characteristics that relevant consumers value *and* there are an unlimited number of equally expensive alternative sites), then the black rectangle representing loss will be large, and the medium grey rectangle representing gain small. Obviously, the builder will lose revenue in such cases. If demand is inelastic (the jurisdiction has special characteristics that relevant consumers value *and/or*

176. These graphs depict builder revenue in the short-run—before suppliers have time to adjust their behavior to account for the revenue change.

177. Of course, residential developers can always price discriminate by differentiating units and bargaining with individual customers. However, price discrimination by product differentiation or bargaining is costly and inaccurate.

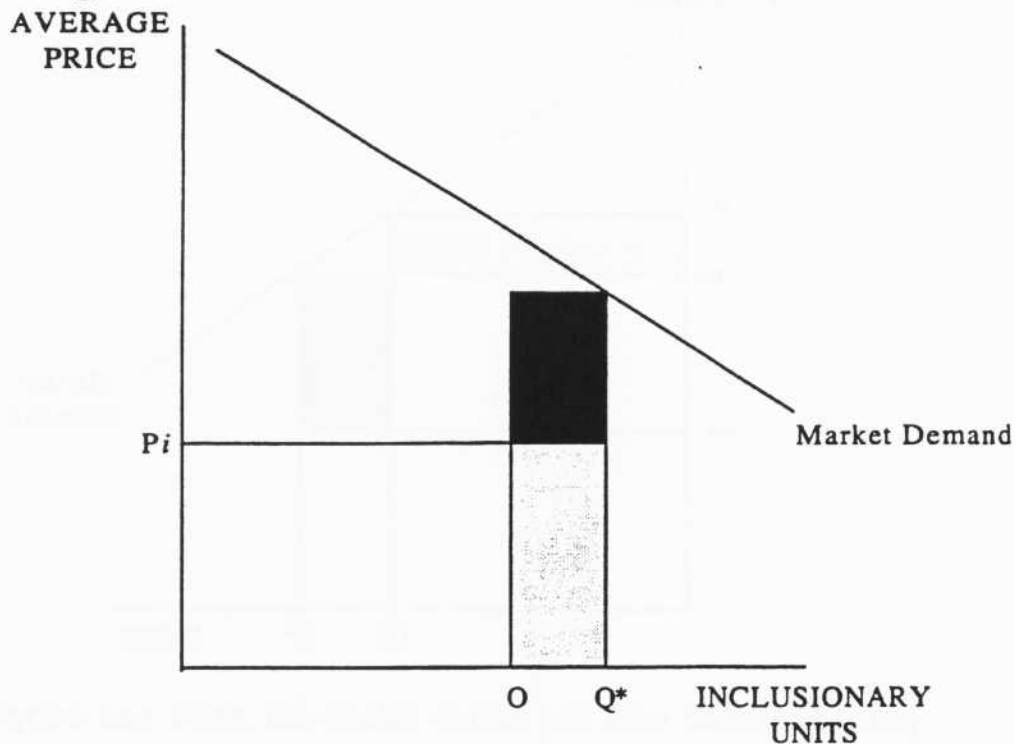
Perhaps more importantly, developers cannot enforce any agreement about price discrimination with the same efficacy as a mandatory set-aside zoning regime. Without perfect trust among developers, product differentiation will not lead to profit capture—prices above the cost of differentiation—because of competition among developers (i.e., "cheating" will gradually decrease the price of the differentiated product).

Figure 6: Builder's Revenue from Non-Inclusionary Units

there is a scarcity of similarly priced alternative sites), then the rectangle representing loss will be small and the rectangle representing gain will be large.

The implication of this analysis to the way in which laymen and legal economists like Ellickson view Regime Three is unsettling: *in areas with inelastic demand for housing, developers may enjoy an increase in total revenue from the imposition of a mandatory regime, even if that regime grants no density bonus.* This revenue gain could *not* be achieved by developers acting independently. In fact, it is unlikely that isolated developers, faced with an inclusionary zoning proposal, could even predict the full possibility of the gain. To favor such a proposal, developers would have to be sophisticated enough to see the benefits of region-wide price discrimination, and trusting enough to allow the government to coordinate it.

Figure 6 assumed that the units disappear if they can no longer be sold at market price. Obviously, that is not the case. The developers make *some* revenue from the sale of the inclusionary units. That revenue is represented in figure 7. Here, P_i represents the price ceiling on the inclusionary units set by the local jurisdiction. The level of this ceiling can be chosen by the jurisdiction, but it is

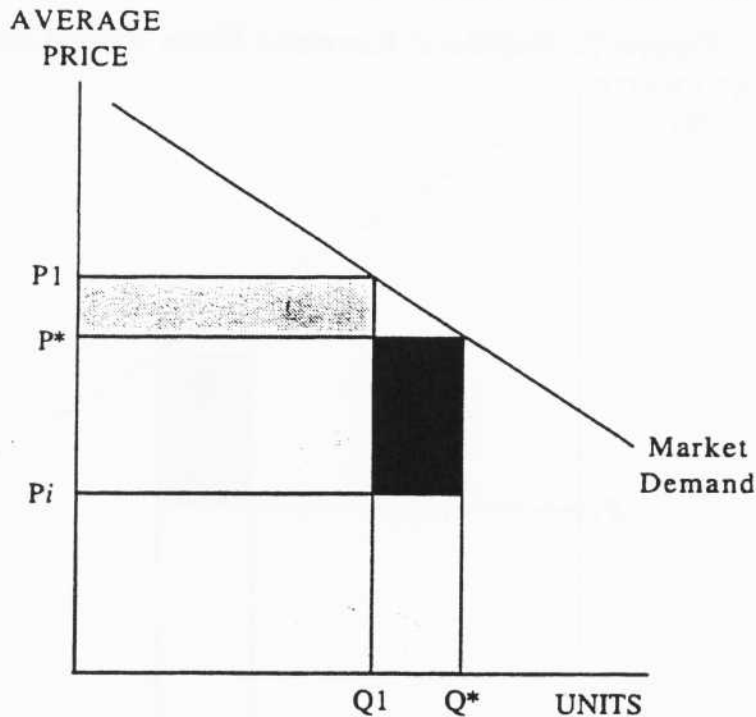
Figure 7: Builders' Revenue From Price-Controlled Units

limited by the ability of the target residents to pay.¹⁷⁸ The number of set-asides— S_i —is represented by $0-Q^*$. By definition, this number equals the number of units of volume “lost” in figure 7.

The total effect on builder revenue is the sum of the two graphs, which is depicted in figure 8. Part of the loss represented by the black rectangle has been offset by the revenue from the price controlled units. Notice that now, given our hypothetical demand curve, the area of the black rectangle representing loss is approximately equal to the area of the medium grey rectangle representing gain. Profits, therefore, remain steady.¹⁷⁹ There has been no decrease in revenue, despite the fact that the individual inclusionary units are sold for less than their cost of production. In this respect, the jurisdiction’s help in raising prices for the non-inclusionary units under Regime Three serves a similar purpose as the jurisdiction’s ability to grant density bonuses under Regime Two: the otherwise illegal revenue gains help offset possible marginal losses that developers suffer in building the inclusionary units. In the hy-

178. In most regimes the situation is slightly more complex. The residents of the inclusionary units pay an amount greater than P_i , but the builders receive only P_i . The difference goes to defer the costs of running the price-control system.

179. Of course, the inclusion of low income home buyers may cause demand to shift backwards slightly because part of the Exclusivity Premium is lost.

Figure 8: Total Short-Term Builder Revenue Change

pothetical case with the above values for price and supply elasticity, there is no decrease in the return to any productive factor ($\Delta P = 0$). In other cases, revenue may fall or rise, depending on elasticity.

(ii) Effect of Short-Run Revenue on Supply

(A) Effect of Decreasing Returns

Gradually, given the various assumptions of perfect competition, a decrease in total revenue will shift the supply curve backwards, decreasing quantity. The shift will continue until the revenue loss has been absorbed. Without costs savings by the developer, the supply curve will shift until the area of the rectangle representing revenue gain equals the area of the rectangle representing revenue loss. The two graphs in figures 9 and 10 show how short-term losses affect long-term quantity. Here, the supply curve shifts backwards from the old equilibrium (Q^*) until the areas of the black loss and medium grey gain rectangles are equal. The market price of non-inclusionary units moves quickly up to $P1$, and then continues to climb gradually until it reaches $P2$. The quantity of non-inclusionary units settles at $Q2$. The number of inclusionary units, of course, remains the same. Total quantity has fallen to QT (i.e., $Q^* - QT = -(\Delta P * \eta S)$).

(B) Effect of Increasing Revenues

If demand is inelastic enough, gains from price discrimination will outweigh losses from construction of the inclusionary units. Developer revenue will then increase, as the jurisdiction allows the developers to act as a state-sanctioned cartel. These ensuing stages of the Regime Three inclusionary zoning model are shown in figures 11 and 12. Here the gain in total developer revenue pushes the supply curve outward along the steeply sloping demand curve until the two rectangles are equal. Increased supply represents more output by existing developers and/or new entry. The price of non-inclusionary housing moves to P_2 ; total quantity, to QT (i.e., $Q^* - QT = \Delta P * \eta S$).

(iii) Revenue and Regime Three's Goals

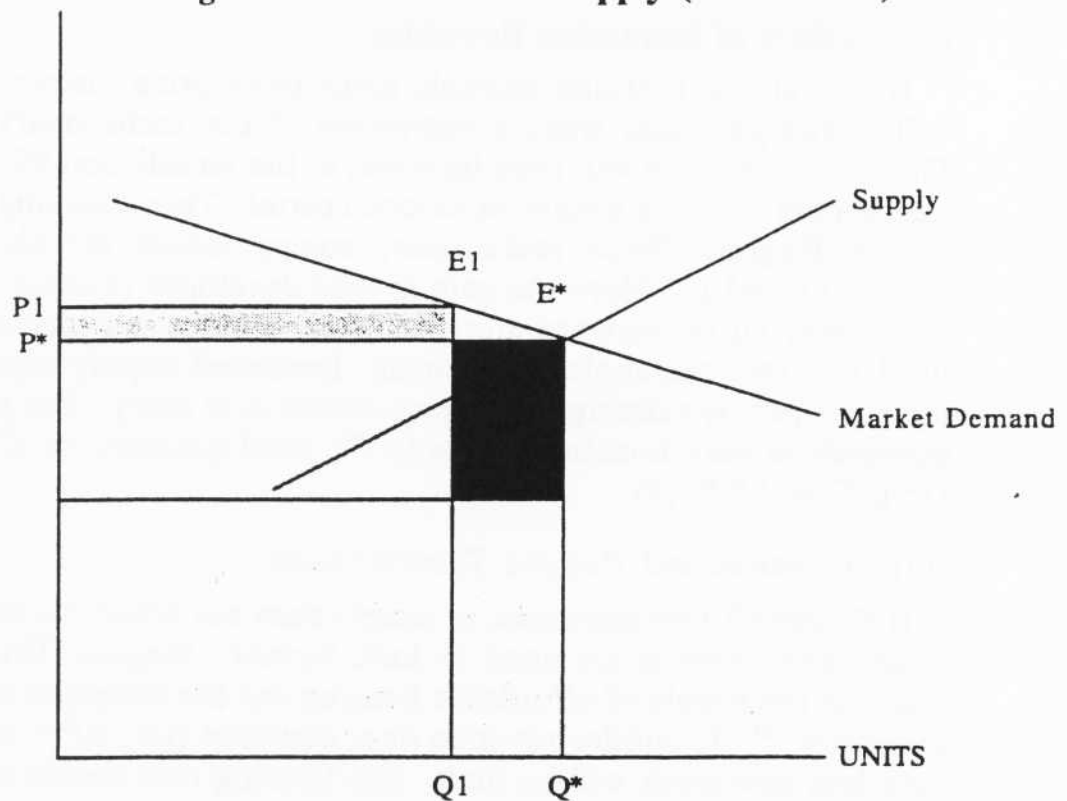
If Regime Three increases, or simply does not affect, builder revenue, then there is no need to look further. Regime Three will increase the supply of affordable housing *and* the supply of housing generally.¹⁸⁰ If builder revenue does decrease (i.e., $\Delta P * \eta S < 0$), then less new stock will be built. The filtering rate should then be examined to determine if the lost market-rate stock would have helped the target population more than the set-aside. If revenues may fall, determining the Filter Rate becomes critical for the zoning policy planner.

c. *Determining the Filter Rate (f)*

According to the filter theory, the construction of 100 market-rate units will increase the supply of affordable housing by 100 units—no matter what the market-rate, and no matter what definition we give to the term “affordable.” The worst 100 units on the market will either be bought by current home-renters (or the homeless), or abandoned.¹⁸¹ Empirically, however, these results never occur. The translation of the filtering process from theory to reality (or from theory to better theory) involves the introduction of distance—spatial and temporal—between new units and their target population. Distance between the construction and “receipt” of a unit creates attrition. Housing economists have other words for the same phenomenon. The physical units are called “stock.” The ability of those units to shelter residents is called

180. If $P > 0$; then $(\Delta P * \eta S) * f + S_i > 0$ (because the elasticity of supply, the Filter Rate, and the set aside (ηS , f , and S_i , respectively) are always positive numbers).

181. See generally HOUSING IN AMERICA: PROBLEMS AND PERSPECTIVES 161-203 (Roger Montgomery & Daniel R. Mandelker eds., 2d ed. 1979).

Figure 9: Revenue and Supply (Short-Term)

“services.” As time passes, the capacity of the stock to provide services changes, usually decreasing. Stock capacity changes because of physical deterioration and changes in the value of the units’ neighborhood.¹⁸² The speed of change is influenced by the original physical characteristics of the stock and the level of maintenance.¹⁸³

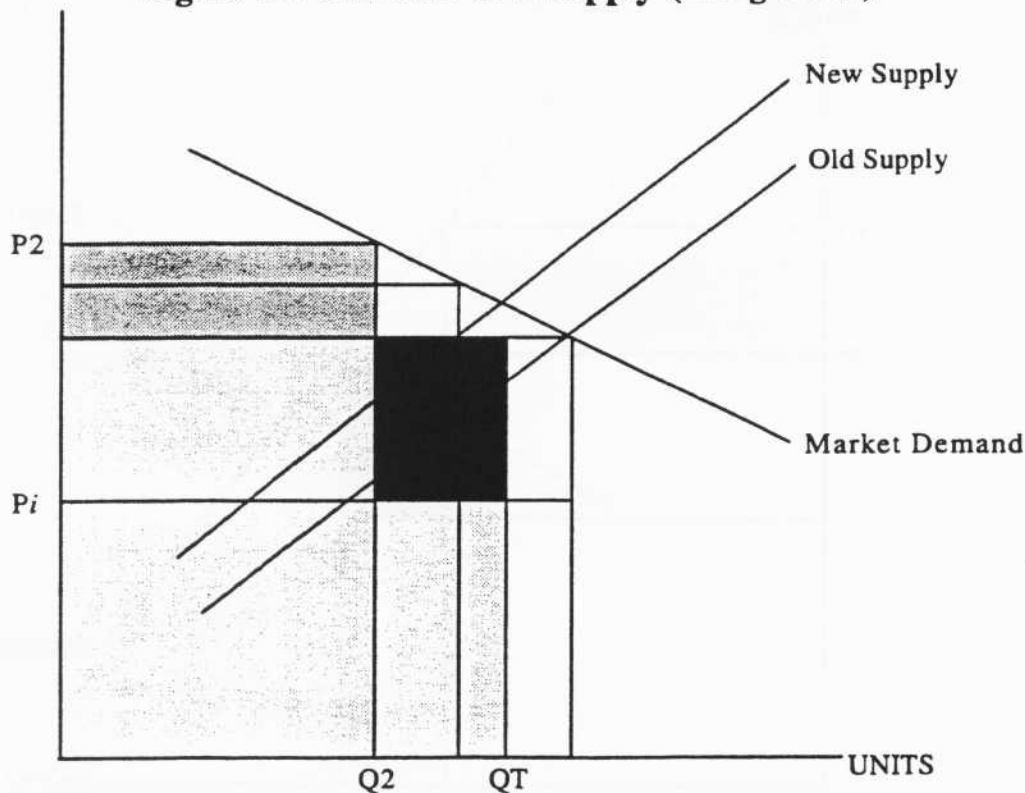
When judging the filtering effects of new construction vis-à-vis a target population of expected recipients, it is more useful to speak of the Filter Rate. The Filter Rate can be defined as the percentage of new investment in physical housing stock that translates into actual benefits in physical housing services enjoyed by the target population. It corresponds to the practical question: How much does constructing X units for the wealthy actually help the poor? Filter Loss is one minus the Filter Rate ($1-f$).

(i) Causes of Filter Loss

The advisability of a Regime Three intervention depends, in part, on the *total* Filter Loss for the market-rate units that would

182. See POZDENA, *supra* note 87, at 43-44.

183. *Id.*

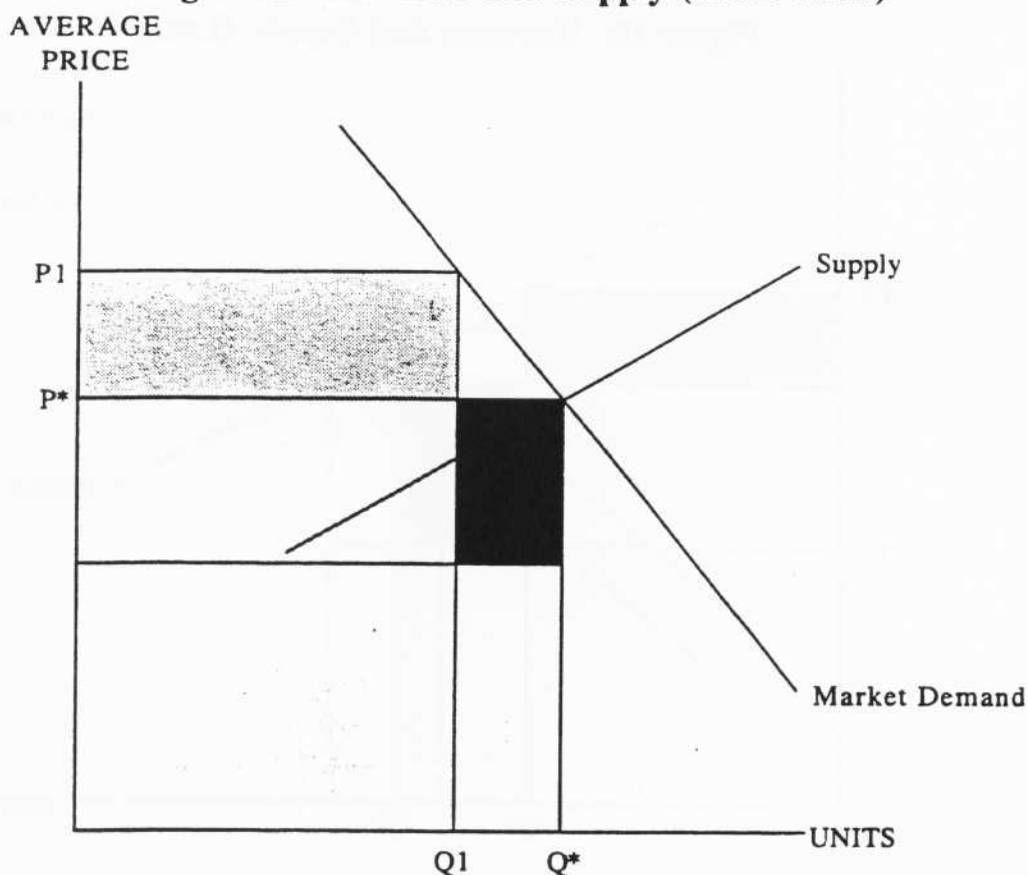
Figure 10: Revenue and Supply (Long-Term)

otherwise be built. To explain why Filter Loss occurs, however, it is necessary to be more reductionist—for total Filter Loss is the sum of thousands of little failures. Some correspond to market failures as traditionally understood; others, because the poor are simply outbid, are efficient transactions between the two parties.¹⁸⁴

The first and greatest cause of Filter Loss is time. The rate of stock deterioration changes with the level of maintenance expenditure, and the necessary level of maintenance expenditures increases as a unit gets older. Accelerating deterioration results in many affordable rental units where tenant rents do not cover necessary upkeep. Once a critical threshold is reached, it becomes cheaper for the landlord to “milk” the building—collecting rents but spending zero dollars on upkeep. Milked units quickly become uninhabitable—lowering the sale value of other homes in the troubled neighborhoods and causing more landlord exit.¹⁸⁵ People with more money for maintenance might have saved these older units, and the low income residents who watched helplessly as they

184. Even transactions that are Kaldor-Hicks efficient are treated as Filter Loss because of the goal of the inclusionary regime to increase the number of affordable units (and the claim by its opponents that it cannot).

185. See Kennedy, *supra* note 28, at 489-97.

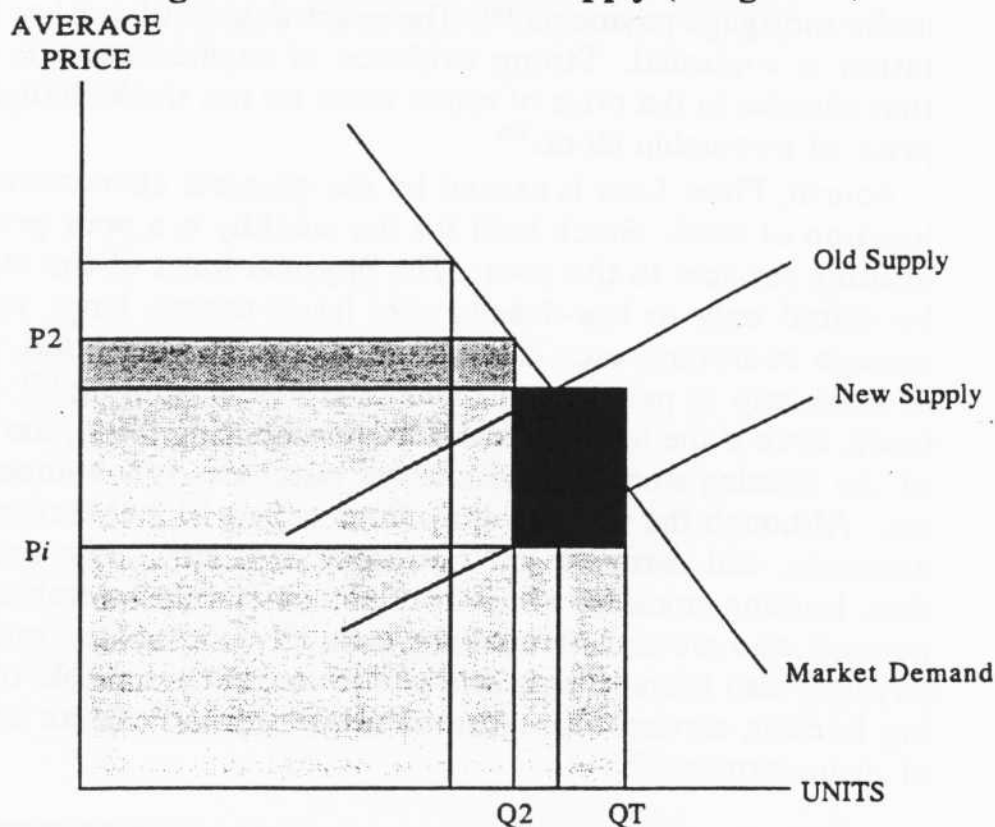
Figure 11: Revenue and Supply (Short-Term)

were destroyed might have done fine in newer units with fewer running costs.¹⁸⁶ Ironically, the filter theory of housing seeks to effect the opposite situation: those with money for maintenance live in units that do not need it; those whose homes need maintenance have no money.

Second, Filter Loss occurs when political, social, cultural, geographic, or racial barriers separate stock from potential buyers. These barriers can be seen as transaction costs, even though they sometimes make transactions illegal rather than just inconvenient. Federal Section 8 or Moving to Opportunity voucher holders have been legally forbidden from redeeming their coupons in many suburban jurisdictions.¹⁸⁷ Private realtors may not advertise homes in media to which persons living anywhere in the region have access. Banks may refuse to extend credit. Racism plays several different roles: making buyers and potential neighbors afraid, and creating

186. See MALLACH, *supra* note 7, at 47.

187. See Paula Beck, *Fighting Section 8 Discrimination: The Fair Housing Act's New Frontier*, 31 HARV. C.R.-C.L. L. REV. 155 (1996); Philip D. Tegeler, *Housing Segregation and Local Discretion*, 3 J.L. & POL'Y 209 (1994).

Figure 12: Revenue and Supply (Long-Term)

racially-identified boundaries that sale or lease transactions do not cross.¹⁸⁸

Third, Filter Loss occurs because the markets for rental and ownership units in America are distinct. Market separation results from the disparity between tenant and owner preferences for physical housing types. Although it is possible for owners to move units between the rental and ownership markets, such moves are costly, especially for multi-family housing.¹⁸⁹ Market separation is exacerbated by barriers to home ownership. One such barrier is income differentials between owners and renters.¹⁹⁰ Another barrier is erected by strict mortgage financing rules (usually decided by private

188. See generally Ford, *supra* note 2.

189. For single-family homes switching is common (although demand for rental units is minimal because of the tax benefits of ownership). For large, multi-family apartment complexes the switch may involve a rather costly legal process. See U.S. DEP'T OF HOUSING AND URB. DEV., *THE CONVERSION OF RENTAL HOUSING TO CONDOMINIUMS AND COOPERATIVES* (1980). Moreover, because of the difference in tastes and income between rental and ownership markets, the switch requires considerable new investment.

190. Eighty-eight percent of all renters cannot afford the median-priced home. *Multifamily Housing Finance and Production: Hearings*, *supra* note 20, at 35.

lenders) that confine consumers with certain traits to the rental market—even though they may have the income necessary to make mortgage payments.¹⁹¹ The exact degree of market segmentation is contested. Strong evidence of segmentation is the fact that changes in the price of rental stock do not track changes in the price of ownership stock.¹⁹²

Fourth, Filter Loss is caused by the physical characteristics and location of stock. Stock built for the wealthy is a poor provider of housing services to the poor. The physical traits of the stock may be suited only to low-density use: large rooms, large yards, not enough bedrooms, etc. Unless such units are renovated, they are of little help to persons who need affordable housing.¹⁹³ Furthermore, even if the unit is physically capable of filtering, the location of the housing stock can discourage purchase by low-income buyers. Although the wealthy can afford to pay higher transportation expenses, and certainly are not dependent on public transportation, housing stock far away from jobs is largely unusable to poor persons who are actively seeking work.¹⁹⁴ Stock in the middle of a city may also become unusable—or at least, less capable of providing housing services—because of neighborhood effects and cycles of disinvestment.¹⁹⁵

191. MALLACH, *supra* note 7, at 73-75 (a bad credit history or the absence of a down payment precludes most renters from ever becoming owners).

192. See POZDENA, *supra* note 87, at 80. Much of the discrepancy can be explained by the differing motivations of buyers and renters. Rental prices include only the price of housing services. Ownership prices include the price of housing services *and* the price of a favorably-taxed investment. Rental prices are largely determined by demand and physical stock supply. Ownership prices vary with interest rates, tax policy, and expectations of future wealth. An exacting analysis of the Filter Rate of ownership stock to poor renters would require a disentangling of the many reasons why people buy homes.

193. Even when such conversions are attempted, they are often done illegally, with sometimes chaotic results. See, e.g., Frank Bruni & Deborah Sontag, *Behind a Suburban Facade in Queens, A Teeming, Angry Urban Arithmetic*, N.Y. TIMES, Oct. 8, 1996, at A1 (reporting on how a combination of "stubborn poverty" and the dwindling supply of affordable housing in the New York City metropolitan area has led to a surge in illegal apartments in Queens, a borough "that once fancied itself the tranquil gateway to Long Island").

194. Cf. James Dao, *Welfare Rules Created for Cities Cause Trouble in the Countryside*, N.Y. TIMES, Aug. 9, 1995, at A1 & B4 (commenting on the New York state rules which limit the value of vehicles owned by welfare recipients, thereby eliminating dependable transportation to jobs for poor persons who reside in areas of the state not served by public buses).

195. See Wilson, *supra* note 4, at 9-11. One might point out that filtering has left certain areas of the Bronx, within the borders of America's largest city and most expensive regional housing market, an uninhabited ruins.

Fifth, demographic change can cause dramatic Filter Loss. Whenever the number of persons interposed between the original buyers and the target population increases, filtering slows. In the 1970s and 1980s, a surge in the number of younger adults at middle-incomes all but eliminated filtering to the poor in many American cities.¹⁹⁶ In such a situation, the Filter Rate (f) equals zero and Regime Three will *always* increase the supply of affordable homes.

Related is the phenomenon of "gentrification," where high density urban stock is renovated for use by the wealthy.¹⁹⁷ The filter theory must assume that *any* housing trade will improve the stock choices of the displaced. That bit of wishful thinking ignores the probable inappropriateness of the gentry's prior residence in affordable housing, and the effects of relative income on the ability to bid for space. The latter point is critical in understanding Filter Loss. The supply of physical housing services is limited by the feasible number of sites. Different groups compete for these sites on the basis of their relative incomes. As relative income disparities between the rich and poor increase—as they did at an unprecedented rate during the 1980s—the total amount of space possessed by the wealthy increases, while the total amount of space possessed by the poor decreases. Gentrification represents the worst symptom of this phenomenon. Often, the gentry have multiple residences; almost always they live with a much smaller number of occupants per room than the residents whom they displace—consistent with the current trends of early move-out from the parents' home, late marriage, and few children.¹⁹⁸

The sum of all these factors is the chance that a move in the filter chain will not occur. The total Filter Loss for a new development can be found by multiplying this chance by the number of moves needed for the benefit of the new stock to reach the target popula-

196. See *Reassessing Rent Control*, *supra* note 52, at 1836-37; see generally Aoki, *supra* note 25; Merrill & Lincoln, *supra* note 7.

197. See *Reassessing Rent Control*, *supra* note 52, at 1835-41 (gentrification removes stock from the affordable housing market without providing replacement units). The relative buying power of the "gentry"—who often bid to own multi-family buildings—is reinforced by federal tax policy. See Kenneth K. Baar, *Guidelines for Drafting Rent Control Laws: Lessons for a Decade*, 35 RUTGERS L. REV. 723, 837 (1983) (the value of a condominium is often double that of the same physical unit used as a rental). See *supra* note 192 for the tax reasons behind the price discrepancy.

198. *Reassessing Rent Control*, *supra* note 52, at n.12, citing William Alonso, *The Population Factor and Urban Structure*, in *THE PROSPECTIVE CITY* 32, 36-37 (Arthur Solomon ed., 1981).

tion.¹⁹⁹ The constituent elements of the Filter Loss are too complex to predict actual numbers without reference to a concrete situation. But because time, some market segmentation, some income disparity, and some transaction costs are unavoidable, the rate of Filter Loss will always be greater than zero.²⁰⁰ To the extent that the Filter Loss is greater than zero, the building of a new unit of housing for the wealthy will not benefit the poor as much as the building of a new unit specifically for the target population.

Extremely high Filter Loss is more likely to be encountered in certain kinds of markets—those with old stock, stock far away from employment opportunities, barriers to mortgage financing, “bad” neighborhoods, substantial income disparities, a risk of gentrification, or a general scarcity of buildable space. Where Filter Loss is high, even a large drop in the production of market-priced housing will have little deleterious effect on the welfare of the poor.

d. Overall Supply Effects

It should now be clear that even Regime Three, the hypothetical worst-case intervention, is likely to increase the stock of affordable homes. It will increase the amount of affordable stock when

- 1) demand is inelastic and the developers' new ability to price discriminate outweighs revenue losses ($\Delta P > 0$);
- 2) factor exit is not a reasonable possibility ($\eta S \approx 0$); or
- 3) the Filter Rate is low ($f \approx 0$).

Any of these conditions is sufficient—if even one exists, no further analysis of Regime Three's efficacy is necessary.

If *none* of these three conditions exist, however, the advisability of Regime Three in terms of affordable stock growth depends on whether the loss in filtered-down market stock is bigger than the set-aside ($\Delta P * \eta S * f < ? > S_i$). An increase in affordable stock is also likely in markets with inelastic demand—or when the intervention is regional—because the supply shift will be small. An increase in affordable stock is likely in markets characterized by

199. The *Mt. Laurel* court applied similar logic. See *Mt. Laurel*, 456 A.2d at 451-57 (rejecting defendant county's argument that filtering will produce needed affordable housing on evidence of increasing suburban prices, increasing suburban demand, and the risk of abandonment cycles).

200. Significant investment may cause a fixed number of old luxury units to be turned into a greater number of higher-density affordable units. This does not mean, however, that there has been Filter Gain, or that the Filter Loss is < 0 . The new investment itself is a supply increase. Filter Rate and Filter Loss are measures of the effects of the old investment on its own terms and without additional money.

many old buildings, racial or other filtering barriers, or demographic growth, because the Filter Rate will be low.

Therefore: the *only* markets in which Regime Three will not increase the housing stock are those with *all three* of the following: (1) low Filter Loss; (2) elastic consumer demand; and (3) elastic supply of land (a danger of factor exit). Even when they are present, to the extent that a regional intervention makes demand inelastic, a regional intervention will increase the affordable stock.²⁰¹

Any intervention which occurs in the face of an inelastic demand curve, including any regional intervention, does risk encouraging gentrification. As the price of new housing increases, the wealthy will turn to the old stock—renovating and possibly displacing it. This effect may or may not be serious, depending on the costs of converting the existing stock to “gentry” uses. It will never offset the full benefit of Regime Three on the stock of affordable housing because some conversion costs always exist (one must remember that the demand curve *was* inelastic). To the extent conversion costs are *not* sufficient to meet a region’s agenda to stop gentrification, there are two options: set legal barriers to gentrification (rent control on the old stock is a solution which has additional positive supply effects in gentrifying markets²⁰²); or keep the Regime Three price effect as small as possible.

2. *Winners and Losers Under Regime Three*

a. *Existing Homeowners*

Existing homeowners have reason to be ambivalent toward Regime Three—but they will like it more than Regime Two. The drop in the Exclusivity Premium may be less. The loss of the prestige/prejudice component may be smaller because part of the earlier loss was a reaction to increased density, not merely the new inhabitants. The loss of the tax component may be smaller because

201. Regional demand is less elastic because consumers can no longer shop for favorable deals between jurisdictions. It is still elastic to the extent that buyers substitute old stock for new construction, or substitute other purchases for housing when the price of housing increases. The critical, exogenous variable then becomes the price elasticity of regional demand for housing services among the wealthy. Current research methods can determine this number with reasonable accuracy.

202. Only the most closed-minded observer could read *Reassessing Rent Control*, *supra* note 52, and still think that any economic theory dictates that rent control on existing stock will harm the supply of affordable housing in a gentrifying market.

Regime Three is unlikely to house as many poor persons (and fewer poor persons need fewer services).²⁰³

Even better for homeowners: the restriction in the supply of market-price homes will tend to increase the resale value of existing residential property, at least in jurisdictions with somewhat inelastic demand. Suburban homeowners who want to sell can reap considerable profits. Ellickson goes so far as to claim that the desire of local homeowners to capture this additional resale value motivates most inclusionary zoning reform in California.²⁰⁴ This claim is dubious because the loss in Exclusivity Premium (especially in the wealthy suburbs about which Ellickson writes) will usually be greater than gains in resale price caused by the restriction in competing supply. Furthermore, homeowners who do not sell do not benefit at all from inclusionary zoning. To the extent Ellickson is correct, however, proponents of affordable housing have a strange and valuable ally.

b. Owners of Undeveloped Suburban Land

Landowners are clearly losers under Regime Three. In markets not characterized by perfectly inelastic demand curves or by excessive developer profits, the owners of undeveloped suburban land will see a drop in the value of their property. This decrease will be greater per inclusionary unit than it was under Regime Two, because there is no density bonus to mitigate losses.

c. Buyers of Non-Inclusionary Units

Those who buy non-inclusionary units in jurisdictions with somewhat inelastic demand curves will *inevitably* pay higher prices for new and used homes. The price increase will reflect both a proportion of the costs of the inclusionary units, and whatever cartel profits developers can wring out of the restriction in supply. If demand is elastic, the effect on buyers is the same as under Regime Two: as a group they break even, but the ones who value the Exclusivity Premium more than the average buyer suffer a decrease in welfare.

203. If Regime Three builds the same number of affordable units as Regime Two, then the loss of the tax component of the Exclusivity Premium caused by Regime Three may be greater. Services may cost *more* because of sprawl. FISCHER, *supra* note 7, at 268 (provision of utilities and schools costs more when density is low).

204. "Viewed most cynically, inclusionary zoning appears to be a clever double tax on new construction that existing homeowners and landlords have devised largely in order to augment their own wealth." *Irony, supra* note 5, at 1203.

d. Recipients of Inclusionary Units

Consumers who receive inclusionary units still benefit. The enjoyment of this benefit may be inefficient under the typical tests. The amount of inefficient welfare gain will increase because the inclusionary units are bigger.

e. Other Low Income Buyers

The welfare of the low income residents who seek homes in other jurisdictions depends on the direction of the affordable stock change. Ellickson is wrong when he writes that "the members of the eligible class who do not receive units are hurt by the program" whenever the "inclusionary government faces a downward sloping [elastic] demand curve."²⁰⁵ A downwardly sloping demand curve means *inelastic* demand, and the corresponding ability of developers to capture extra revenue from state-enforced price discrimination. Furthermore, regardless of the slope of the demand curve, housing consumers cannot be hurt to the extent that additional costs are passed on to the owners of underdeveloped land.

If quantity does not change, and to a lesser extent, even if it does, low income housing consumers may still benefit from Regime Three. The fact that low income persons are moving into the new units suggests less Filter Loss. If the inclusionary program contains resale restrictions, limiting the new units to residents in the target class, the Filter Loss approaches a perfect 0.

f. Public Administrative Costs

In all important respects, the administrative costs of Regime Three are identical to those of Regime Two.

3. Effects of Regime Three: Running Summary

Local Regime Three interventions can increase the stock of affordable housing in all jurisdictions with high Filter Loss, inelastic demand among market-rate buyers, or very inelastic supply of land. Regional interventions, to the extent that they face a more inelastic demand curve, are likely to be more successful (although they must be careful to avoid gentrification). Regime Three also effects a substantial income transfer from wealthy consumers to poorer ones. Sometimes that wealth transfer will benefit only those who actually receive the inclusionary units. Unless development is slowed considerably, however, the wealth transfer will usu-

205. *Id.*

ally benefit even those low income housing consumers who do not receive inclusionary units directly. Their new wealth is "taken" from, in decreasing order of probable incidence: landowners, wealthy home buyers, and developers.

Although Regime Three fares well against the status quo or even a free market, it will almost always be worse than Regime Two. Like Regime Three, Regime Two allows developers to price discriminate against a sloping demand curve and capture additional revenue. However, developers under Regime Two also benefit from the cost savings that come with higher density construction. The additional per unit savings will make affordable housing construction more profitable than under Regime Three—either increasing revenue more or setting off a greater proportion of the inclusionary losses (depending on the nature of demand). Regime Two also changes the physical characteristics of the housing stock in ways that lower Filter Loss and allow a more efficient mix of construction inputs than under Regime Three.

If Regime Three has advantages vis-à-vis the other Regimes, these advantages are political, rather than economic. Regime Three may curtail new construction that competes with the existing stock. Regime Two can do that as well. But Regime Two also creates cost savings from higher density and efficient use of inputs—meaning a greater number of new units. Obviously, more units is good from the standpoint of housing policy. But more units, especially more affordable units, will endanger the Exclusivity Premium and intensify political opposition from existing home owners. Regime Three, on the other hand, limits construction and makes sure that inclusionary units fit exclusionary density patterns. The loss of Exclusivity Premium is smaller, and the increase in cartel rent is not offset to the same degree. Ellickson saw this welfare gain and rejected inclusionary zoning as harmful. The irony of *Irony* is that the promise of cartel rent may speed beneficial reforms.²⁰⁶

206. Note that the political advantages of Regime Three decrease as the political power of developers grows. The choice between Regime Two and Regime Three therefore represents a struggle between two coalitions: homeowners and inclusionary consumers versus developers and wealthy consumers. Also note that, from an economist's perspective, the need to rely on elements of Regime Three, still an improvement over the status quo, is unfortunate, because the other two regimes are better able to increase the supply of affordable homes.

IV. Conclusion

This Article offers no detailed advice on how to implement any of the three regimes. Nevertheless, an important point follows naturally from the discussion above. The choice between the pure builder's remedy and an inclusionary program with set-asides depends upon the buying power of the target population. If the target population has adequate income, or the government is ready to provide some form of subsidy, a builder's remedy may be best. Builders will naturally respond to the demand for affordable construction and self-enforce the inclusionary rules. Housing stock will increase. The market will function more efficiently, unless so many remedies are awarded that stock and efficiency gains are outweighed by legitimate regional externalities. There will be no public costs besides those necessary to hear appeals.

If the buying power of the target population is low, a builder's remedy may not make much difference, absent scarce government subsidies. One point of this Article is that such subsidies are unnecessary for successful housing reform in jurisdictions where market inefficiencies created by exclusionary zoning can be converted into *de facto* subsidization by inclusionary zoning. Set-aside programs (voluntary or mandatory) that trade density variances for set-aside obligations can help solve the problem of the buying power of the poor.

The choice between voluntary and mandatory programs is also a function of how much buying power a particular jurisdiction wants to distribute to the poor. If the target population needs only a shallow subsidy (or if a deep subsidy can be provided without losing developer enthusiasm), then a voluntary regime is probably an acceptable solution. In areas where a greater transfer of neighborhood wealth is necessary to promote affordable housing, zoning rules should be mandatory. In the latter case, below-cost construction will be paid for primarily by homeowners and owners of developable land.

In some situations, the needs of the target population may be so great that inclusionary zoning cannot provide enough affordable homes without reducing the profitability of luxury residential construction. Local authorities should be cautious in such situations. It would still be wrong, however, to reject inclusionary programs as harmful to the poor. Even inclusionary programs that threaten builders' profits change the nature of the housing stock, increase the Filter Rate, distribute the regional tax base more evenly, lessen price pressure in existing urban communities, and increase the mo-

bility, opportunities, and wealth of the American poor. The policy debate about inclusionary zoning—which involves many more issues than the economic consequences set forth above—should move forward with this in mind.