FISCAL DECENTRALIZATION
AND LAND POLICIES

Edited by Gregory K. Ingram and Yu-Hung Hong

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Political Structure and Exclusionary Zoning: Are Small Suburbs the Big Problem?

William A. Fischel

T he inquiry "Are small suburbs the big problem?" arose from a casual statement I made at a Lincoln Institute conference to the Institute's president, Greg Ingram. I said that smaller local governments were more likely to adopt antigrowth regulations than larger jurisdictions. Ingram, who had formerly lived in a large jurisdiction that is notable for its zoning innovations (Montgomery County, Maryland), asked me if I knew of any systematic evidence for that claim. I certainly know lots of stories. The most embarrassing is from my hometown, Hanover, New Hampshire (population 11,000), which recently rezoned most of the developable land in town from its former 3-acre minimum lot size to 10-acre minima. It was done by voter initiative in response to a large development that would have utilized the 3-acre minimum, which had been in the ordinance for more than 30 years. In my experience, and based on my reading of a wide range of literature (Rolleston 1987; Rudel 1989), small-town democracy is the hotbed of zoning excesses.

Ingram, though, might point out that Montgomery County, Maryland, has for many years had 25-acre minimum lot sizes in large parts of the county. The county is not small; the 2000 population was 873,341 on a land area of 496 square miles. Moreover, the supersize acreage requirement was imposed by the county legislature, not a plebiscite of any kind. Montgomery County stands as at least a partial rebuke to the conventional wisdom (I have had a part in making

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it conventional, if not wisdom) that the excesses of land use regulation are the product of local democracy.

I should add, by the way, that Montgomery County's 25-acre minima are somewhat misleading. Landowners subject to them can use them as currency for transferable development rights (TDRs). Developers who own vacant parcels closer to the Washington, DC, area, can increase the allowable density if they purchase the TDRs that were assigned to the 25-acre-minimum lots when the program was created (Walls and McConnell 2007). So, although the 25-acre standard looks two-and-a-half times worse than Hanover's 10-acre minimum size, the Maryland program's net effect may not really be so exclusionary, although it does seem to raise housing prices there (Pollakowski and Wachter 1990).

Exclusionary Zoning: Selective and General Controls ⸺⸺⸺⸺

An early expression of the importance of small suburbs as engines of antigrowth is Robert Ellickson's "Suburban Growth Controls: An Economic and Legal Analysis" (1977). The trend that Ellickson spotted was the change in orientation of new zoning. Instead of being a municipal expression of the good housekeeping maxim—a place for everything, but everything in its place—or even a device for *selective* exclusion of the poor, as Charles Haar (1953) had pointed out many years ago, the new zoning standards sought to limit all growth. This trend was first called the "growth control" movement, and it has continued to the present under the aliases of "growth management" and "smart growth." It is primarily a suburban phenomenon. Michael Danielson (1976) offered a still-useful book explaining the political grounds for its virulence in the suburbs, and in many and ongoing works on the subject, Anthony Downs (1973, 1994) has identified suburban jurisdictions as the primary source of exclusion.

The title of this chapter invokes the term *exclusionary zoning*, and not everyone agrees what exclusionary means. All zoning excludes something from somewhere. One modern connotation of the term focuses on low-income housing. An ordinance is said to be exclusionary if it makes insufficient provision for low-income housing. The focus of this chapter, however, is land use policy that discourages *all* housing development, not only new units for the poor. A policy that reduces total expected housing starts by 50 percent but reserves 10 percent of those that are allowed for a certain income-segment is still exclusionary. Because housing units are durable and hence over time liable to be sold to lower-income buyers, fewer units for the rich will ultimately mean fewer units for the poor. "Inclusionary" zoning, which requires that housing developers also build and subsidize special units for low-income buyers or renters, would benefit the metropolitan area's poor only if the inclusionary policy is not accompanied by a reduction in the overall rate of housing development (Pendall 2000; Weicher and Thibodeau 1988). It appears that most "inclusionary" zoning programs are in affluent suburbs that are otherwise quite antigrowth. Their "inclusionary zoning" may be a way of either heading off hostile legal action or helping the

city or town save tax money on salaries for public employees for whom the "affordable" housing is earmarked.

Regardless of the merits of my criticism of some aspects of "inclusionary" zoning, however, the reader should understand that in this chapter, "exclusionary" zoning means attempts to reduce the overall rate and ultimate density of housing development. The benchmark for "reduce" is the rate of development and density that would have maximized aggregate local land values in the context of a competitive market for communities. The first part of this criterion, maximizing *aggregate* land value, assumes that there is some level of land use control that is necessary to internalize localized spillover effects (Mills 1979). I am not comparing regulation to no regulation. Optimal regulation maximizes the aggregate value of land, not the value of each parcel taken by itself, since one parcel's most valuable use may cause a net loss to neighboring parcels. The second part of the criterion attempts to discount the monopoly zoning effects, to be discussed presently.

My general thesis is that small suburbs do indeed present a big problem for efficient development of metropolitan areas. I will develop the political economy argument for that hypothesis presently, but first I will present the new evidence I have in support of it, which is contained in figure 5.1. The reader will note

Figure 5.1
Elasticity of Supply and Local Government Structure in 42 MSAs
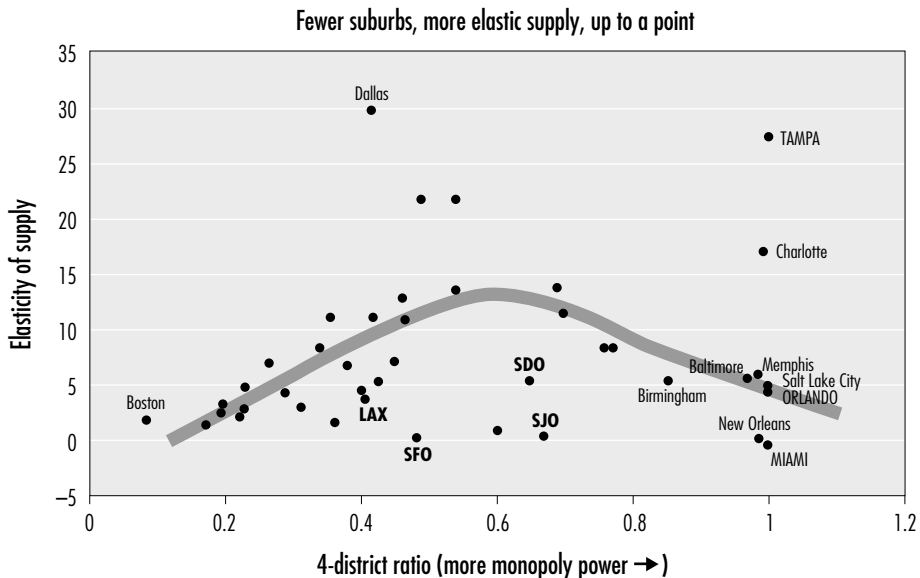
Source: See data appendix.

that this order inverts the usual rhetoric of an economics paper, in which theory comes first and evidence testing the hypothesis comes afterward. The usual sequence makes it appear that the theory was not developed as an ad hoc rationalization for the evidence that has been assembled. I can sidestep that anxiety (which we usually hold anyway, despite the sequence of presentation) by pointing out that the theory that I will advance is one I expressed years ago in *The Economics of Zoning Laws* (Fischel 1985), especially the chapter "The Political Geography of Zoning."

Empirical Evidence: Fragmented Metropolitan Statistical Areas and Housing Supply Elasticity

The vertical axis in figure 5.1 is the elasticity of the supply of housing units in selected Metropolitan Statistical Areas (MSAs) as measured by Green, Malpezzi, and Mayo (2005, 336) for the period 1979 to 1996. (The cities and data are in the appendix.) I regard this elasticity as an index of the degree of regulatory restriction that prevails in the MSA. Green, Malpezzi, and Mayo estimated these elasticities to test whether the index of metropolitan land use regulations developed by Malpezzi (1996) could explain variations in supply elasticity. They found that they could, but not with a great deal of confidence because the regulatory index was the only significant variable in their regression besides density. I submit that their measure of elasticity of supply is actually a better measure of regulatory restrictiveness than the index that Malpezzi employed, which was the product of a survey of developer opinions. (My opinion follows Glaeser, Gyourko, and Saks 2006.) The estimated elasticities in Green, Malpezzi, and Mayo already control for population growth, density, net cost of capital, commuting time, and preexisting density and prices (Mayer and Somerville 2000). Thus, the only intrametropolitan differences left to be explained are natural and contrived restrictions on supply.

In defense of my focus on raw elasticity measures, I would point out that the "natural" constraints on supply such as wetlands and steep slopes are seldom by themselves enough to deter a developer. As the son of a former excavating contractor, I am perhaps overly informed about what a bulldozer can do, but earthmoving is not all that difficult. Most of the large cities of the world have filled in bays and lopped off hills even before earthmoving became mechanized. The supposedly physical or topographic constraints on development are simply natural land forms that are comparatively easy to regulate.

The horizontal axis in figure 5.1 is the four-school-district concentration ratio for the Urbanized Area (UA) of the MSA in 2000 as developed by Battersby and Fischel (2007). The concentration ratio is the aggregate *land area* of the four largest school districts within the UA divided by the land area of the UA. If the UA land area were 100 square miles and the largest district had 20 square miles of its

territory within the UA, the next largest had 15 square miles, the third largest 10, and the fourth largest 5, the concentration ratio would be 50 percent (20 + 15 + 10 + 5 = 50; 50/100 = 50%). Any one of these districts might have more land outside the UA, but only the land area of the district within the UA is counted.

The four-district ratio was developed in conscious imitation of the four-firm concentration ratio from industrial organization. Battersby and Fischel sought to develop a consistent, geographically based measure of the extent of Tiebout (1956) competition among school districts. Tiebout competition is spatial—you have to live in the jurisdiction to attend school there—so our measure of potential choices is by land area, not population. We used the UA as our base because on average 90 percent of MSA land area is essentially rural. The rural parts of most MSA counties are not realistic choices for most home buyers, and the counties that make up most MSAs (all except those of New England) vary considerably in size. Thus, MSA-based measures of school district competition are problematical for comparative purposes. The UA consists of the developed part of the central city plus the contiguous, built-up suburban area of the city. "Suburban" in this case does not refer to municipal or school district boundaries; its extent is determined mainly by housing density. The UA thus offers a nationally consistent, boundary-free basis for comparing how many local governments are available in the part of the MSA where most people live.

The four-district ratio is a measure of relative competitiveness. Because UA area varies (roughly in proportion to population), a large UA with a 40 percent concentration ratio will have larger units of governments than a small UA with a 40 percent ratio. I will nonetheless speak of "competitive" UAs—those with low concentration ratios—as having generally "small" governments. The simple correlation between average district size (measured by number of pupils) and the concentration ratio is 0.47 in the Battersby and Fischel group. This figure is not impressively large, but it does suggest that the more competitive UAs also have smaller units of government.

School districts are limited-purpose municipal corporations, and one of their limits is that they do not do zoning. That would be fine if the school district and the municipality that does the zoning have overlapping boundaries. Only about a third of cities correspond exactly to their school districts, but I have found that most other cities have some correspondence with a single district (Fischel 2007). For present purposes, I submit that the geographic structure of school districts is a reasonable proxy for the geographic structure of the governments that do zoning. A more precise measure would require a state-by-state inventory of which local governments have final say about zoning. My hypothesis gets some support from the left side of figure 5.1. The farthest left observation is the Boston area. It has hundreds of relatively small school districts, and they actually do correspond to zoning units because school districts usually overlap town boundaries in New England. The four largest districts in Boston occupy only 8.5 percent of the UA land area. (If arrayed by population, the concentration ratios would be slightly higher, but not by much. UA boundaries are truncated

to include only densely built-up areas, so within-UA density does not vary much except in the largest cities.) At the same time, the estimated supply elasticity for Boston is quite low.

As the four-district ratio increases along the horizontal axis of figure 5.1, the elasticity of supply generally increases. The UAs in uppercase bold type (LAX, SFO, SJO, and SDO) are in California, where development restrictions are especially stringent, so they have low elasticity of supply for their level of concentration. The main exceptions are the very highly concentrated areas (four-district ratios greater than 0.90), which are mainly in areas in which the school district and the county are the same. These areas are mainly in the South (the Florida UAs are in uppercase) and the arid parts of the West (Salt Lake City is in this group). In these areas, the county is also the major, if not the exclusive, player in regulating the supply of greenfield development. In these areas, the monopoly effect of exclusionary zoning prevails over the political influence of developers. These behavioral propositions are now ripe for more careful explanation.

Local Government Politics: Median Voter or Interest Group?

Land use regulation in the United States has long been the prerogative of local government. Next to the quality of schools, zoning is the local function that residents care most about. Zoning is not the province of experts in the United States; it is a highly political activity. To understand zoning, one must have a political model of local government and a grasp of the institutional setting in which local governments operate.

The competing political models of local government are the median voter model and the interest-group model. The median voter model holds that to determine the demand for any local public service, look at the characteristics of the voters that might determine personal demand for that service and pick the voter with the median characteristic. Thus, if the demand for school spending is thought to be responsive to income, the voter with the median income in the district is a good proxy for the district's demand for education.

The median voter model assumes that local political leaders are faithful conduits for voters' opinions. Thus, the city councils that formulate zoning and changes in zoning ask themselves what they think the majority of voters within their jurisdiction would want them to do. In many jurisdictions, and for zoning issues in particular, the city council does not even have to ask itself. The voters will tell them directly. Voter referenda and voter initiatives are two straightforward checks on the actions of public officials in zoning.

Econometric studies of local public goods in a variety of contexts suggest that the median voter model can be regarded as the political analog of perfect competition (Holcombe 1989). Like the competitive model, the median voter model is used by economists in a wide variety of circumstances, and almost all empirical studies of local government invoke it, but the issue I am examining is whether the accuracy of the median voter model varies by the size of the gov-

ernment unit being examined. On this topic there are fewer studies, but those that have addressed the question have found that the median voter model is less reliable for larger jurisdictions.

The study most directly on point is Turnbull and Mitias (1999), who compared the median voter model's predictions with an open set of alternative explanations for government tax and expenditure patterns. They found that the median voter model dominated others in a sample of municipalities, but when applied to counties and state governments in the same region as the municipalities (the upper Midwest), no particular model consistently explained spending variations. Their study was confirmed for French cities by Josselin, Rocaboy, and Tavéra (2005). Bigger cities give results that diverge from that predicted by the median voter model.

Other studies indirectly support this claim. Bloom and Ladd (1982) found that public officials in smaller Massachusetts towns were more responsive to voter concerns by lowering rates after a property revaluation, whereas officials in larger cities took revaluation as an excuse to raise taxes and spending. Romer, Rosenthal, and Munley (1992) found that smaller New York school districts conformed to the predictions of the median voter model, but not the largest city districts. Political scientists generally have regarded smaller governments as more responsive to voters rather than to business groups (Burns et al. 1993; Dahl and Tufte 1973). Eric Oliver (2000) documents the greater political participation by residents in smaller cities, in contrast to voter indifference in larger cities. Hanke and Carbonell (1978) noted that developer interests were able to forestall California's coastal zone legislation by their influence over state legislators; it passed only after a voter initiative bypassed the legislative gridlock. John Matsusaka's extensive studies (1995, 2000) found that the 23 states that have voter initiatives had smaller and more decentralized public sectors, which suggests that in normal, representative state politics (that is, politics in states that lack statewide initiatives), the will of the majority does not always prevail.

The interest-group theory of local government takes its cue from theories of national politics, in which the ability of voters to monitor their elected officials is attenuated (Stigler 1971). In these models, the key assumption is that the majority of voters cannot easily determine which candidates will work for their interests. Candidates for public office will require funds to persuade voters to elect them. Raising funds for political candidates is more easily done by groups organized around sources of income. Thus, dairy farmers are more likely contributors to candidates for state office; the more numerous consumers of milk will usually be unorganized. A one-cent increase in milk prices does the large number of consumers a few cents' worth of harm per family, but it does the small number of dairy farmers thousands of dollars in benefit. Hence, dairy farmers are easy to organize and more likely to contribute to political figures.

Applying the interest-group model to local land use regulation seems straightforward to some observers (Benson 1981; Denzau and Weingast 1982). Owners of developable land, developers, building trades, and their suppliers and

others whose income would rise with development would seem likely to form the classic interest group. Relaxing the zoning laws would usually increase their incomes. Most such interests have their own trade organizations, so the costs of raising funds to help influence elections and decision making would be low. Plenty of city folklore as well as some influential sociology (Molotch 1976) has it that local officials are beholden to prodevelopment interests.

But the interest-group model requires some modification with respect to land use decisions. Homeowners at the local level are a powerful offset to development interests. Homeowners seldom have a common source of income to unite them (most do not even work in the same jurisdiction), but they do have a common source of wealth: their homes. For most homeowners, the property on which they live in the jurisdiction in which they vote is the most valuable asset they have. Indeed, surveys indicate that most homeowners do not own much else (Tracy, Schneider, and Chan 1999). Nor can they easily diversify or insure their investment against adverse neighborhood change. They are an interest group united by a common type of asset as opposed to a common source of income.

Homeowners also have an organizational advantage that other groups do not. They live in close contiguity to one another, and their children usually attend school together. Local public schools are the most important source of local contacts for adults (Fischel 2006). Because local schools usually overlap with the local government that does the zoning, homeowners can easily form a group to jawbone city officials about the evils of some threatening development. It is worth emphasizing how the median voter and interest group models differ. In the median voter model, it is assumed that everyone has the same interest; it is only a matter of ranking choices about it from lesser to greater amounts. So, school spending and growth restrictions are both positive goods for most homeowners. The median voter selects the amount, not whether to have them. The political process—voting—merely determines how much will be obtained collectively. Interest-group theory arrays people over conflicting interests: Higher milk prices are always bad for consumers and are usually good for producers ("usually" because of the threat of consumer substitution at higher prices). With respect to zoning, more restrictions are usually desired by homeowners and usually opposed by developers. The "usually" here is to rule out extreme cases in which a paucity of regulations would harm developers' ability to market their homes because of spillover effects and in which homeowners might prefer more development to achieve economies of scale in local services. Neither extreme is likely to prevail within the usual range of entitlement battles in metropolitan areas.

Loudoun County as a Synecdoche for Large-Jurisdiction Zoning ⸺

The key empirical question is where the median voter model (the unopposed homeowners) is likely to prevail and where the mixed interest group (homeowners versus developers) model will prevail. The interest group model is more likely to produce a more elastic supply of housing since developer interests will

at least partially counter the interests of homeowners. To illustrate this with a real example, I summarize a news story that ran in the *Washington Post* on January 21, 2007, about the politics of zoning in Loudoun County, Virginia.

Loudoun County is in what was once the "exurban" part of the Washington, DC, metropolitan area. The three close-in suburban counties of Washington are Fairfax County, Virginia, and Montgomery County and Prince Georges County in Maryland. Loudoun is a long step outward, west of Washington Dulles Airport, which straddles the Fairfax-Loudoun border about 25 miles from downtown Washington. As development pushed out (or was pushed out) from Fairfax County, Loudoun County has been transformed into a suburban county since about 1980, growing to about 170,000 population in 2000. As is typical of much American suburban development, the initial suburbanites are quite affluent and, of course, are almost all homeowners. Loudoun County is responsible for all the land use decisions within its territory except for a few incorporated towns that appear to take up a very small fraction of the county's 520 square miles.

With a headline that pretty much tells the whole story ("The Loudoun Network: Political Backers Gain from Growth; Influence of Developers, Allies Runs Deep"), the *Post* reporters detailed how the development lobby worked. In 1999 Loudoun's prodevelopment majority on the County Board of Supervisors, which makes and alters the zoning laws, was replaced by an antidevelopment majority. One of the supervisors who was defeated back in 1999 was active in the development industry and is herself a longtime landowner. She organized a campaign to enable a prodevelopment group to regain control of the Board, recruiting candidates and helping them raise funds for their campaigns. As the *Post* summarized her handiwork, "Overall, companies and individuals tied to the development industry poured more than $490,000 into supervisor campaigns in Loudoun, more than seven times the figure four years earlier, according to data from the nonprofit Virginia Public Access Project."

The campaign succeeded in electing a six-member (of nine) majority on the board, and they went right to work reversing the antidevelopment policies of the previous board. In the process, the development interests that financed their election apparently prospered. A later article in the *Post* reported that a county and federal investigation is now under way to determine whether the benefits received were the result of anything more than the quotidian give and take of Virginia politics.

Large county and big city governments in other metropolitan areas have usually been regarded as being more favorably disposed toward developers than the average homeowner. Political scientists generally have regarded big cities as probusiness (Banfield 1965; Frieden and Sagalyn 1989). It is widely agreed that the main motive for the huge spate of suburban incorporations in Southern California in the 1950s and 1960s was to escape the prodevelopment land use policies of the county and larger city governments, especially those of both the city and county of Los Angeles (Cion 1966; Miller 1981). I found that the primary force leading to suburban municipal incorporations in the Seattle

area in the 1990s was what homeowners regarded as the overly prodevelopment policies of King County and anxiety that annexation to larger cities would leave them similarly unprotected (Fischel 2001, chapter 10). Historian Jon Teaford (1997) documented the many instances in which twentieth-century suburban incorporations were undertaken so that existing homeowners could take over the land use controls. Teaford also describes how metropolitan governance plans foundered on the question of which government would do the zoning. Paul Lewis (2001) reviewed political science literature and presented original survey evidence from California that indicates that larger units of local government tend to be more inclined to support job growth, whereas smaller units are more protective of neighborhood housing amenities. Lewis found that jurisdiction size rather than location (central city versus suburb) was the critical factor.

Stories like that of Loudoun County, Virginia, are extremely rare in smaller suburban communities. In a small town, the number of issues is likely to be fewer. Voters will have some indication, from various informal contacts as well as public records, of where candidates stand. In this situation, the amount of money spent by a candidate has less influence on the outcome. Indeed, in many small towns, changes in zoning laws, even sometimes changes in the zoning classification of a single parcel, are subject to voter referenda.

Typology of Local Governments

The political process is not the only factor that inclines smaller governments toward a no-growth syndrome. The fragmentation of the metropolitan land area into numerous governing units causes the median voter in each unit to adopt a narrower view of her interests. Figure 5.2 is a schematic to assist in seeing the problem. Each lettered shape is a municipality that controls land use within its borders. Economic activity is assumed to occur only within the "metropolitan area," which includes all the contiguous municipalities. Because the topic at this point is geographic structure, not politics, I assume now that only homeowners vote in each municipality and that the median voter model applies. That is, there is no special development interest that can influence politics à la Loudoun County. The question now is, in which type of community would the developer of a substantial number of homes get a better reception from authorities, who are always mindful of the interests of existing homeowners. To improve the motivation of the example, let us suppose that the developer who proposes the new homes and needs a rezoning is doing so in response to increased demand caused by growing employment opportunities in the metropolitan area.

The home-owning residents most likely to be responsive to the home builder are those in Q, the isolated city in figure 5.2. Additional employment in Q-burg confers economic benefits on many existing residents. Aside from own employment prospects being improved, the additional jobs will improve the chances that children, other family members, and friends will stay in the city and not move to another. I am assuming that voters can see the connection between

Figure 5.2
Archetypes of Urban Governance

Fragmented MSA

Concentrated MSA

Isolated small city

Monopoly MSA
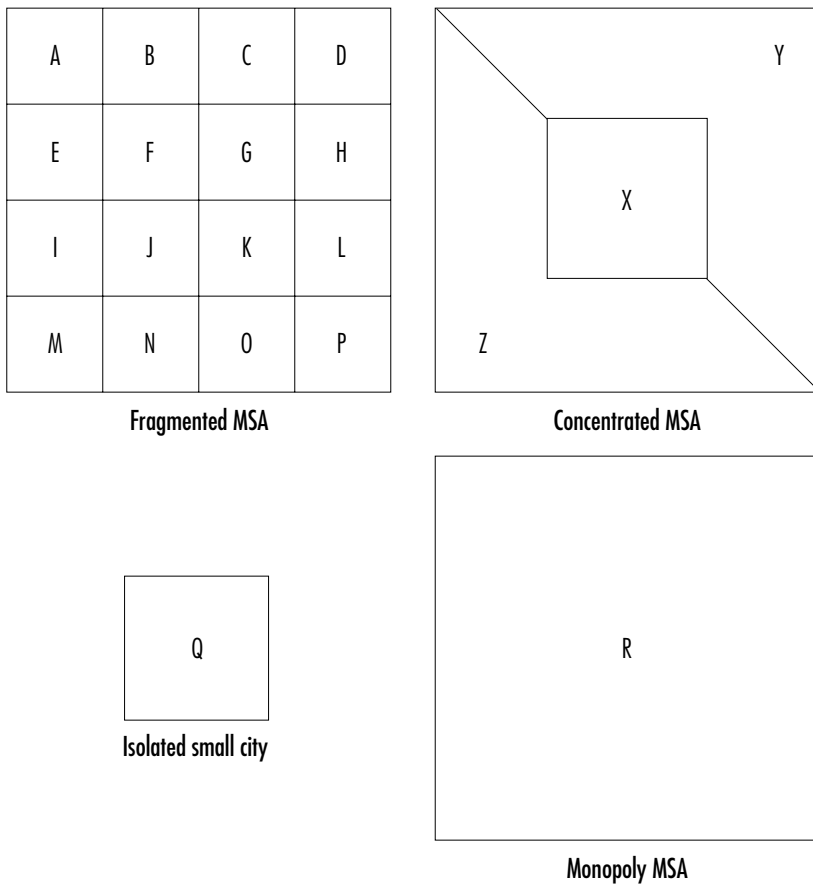
building the new homes and the additional jobs, but if they do not see it immediately, the employers themselves will let it be known that high housing costs would be a deterrent to their relocation plans. Of course, immediate neighbors to the development may object, but their objections will be met by the observation that the larger community's economic health depends on the homes being built somewhere. My claim here is not that the Q-burg city council will prostrate themselves before developers. It is only that they will have more reason to try to overcome neighborhood opposition to development.

Now consider the same situation in any one of the municipalities in the fragmented metropolitan area, say community J in Fragmented MSA in figure 5.2.

To keep the comparison fair, I assume that employment opportunities are rising by the same percentage in the larger metropolitan area as they were in the smaller, isolated city that was just considered. The additional employment, however, is not necessarily located in the municipality in J-ville, where the housing developer wishes to build. Job growth could as likely be in any of the towns A through P, and therein lies the problem for a housing developer who is responding to the increased metropolitan employment. The developer's proposal to build on a parcel in J-ville will inconvenience some neighbors. Community authorities in J will *not* hear much from other residents of J about the need for housing to accommodate the increased employment, even if they are well aware of the benefits to themselves and their families. The J-ville NIMBYs could correctly point out that the proposed housing could just as easily go in another town nearby. If it did, residents of J-ville would still get the same employment benefit but not have to put up with the additional housing. Because every town would face the same situation, the housing developer in the fragmented metropolitan area would have a more difficult time getting regulatory permissions in any locale.

An intermediate situation arises in the Concentrated MSA in figure 5.2, which has the same population and area as the Fragmented MSA, but which is divided into only three large local governments, X, Y, and Z. A housing developer in X will have a somewhat easier time with the regulators, but not because developers in a jurisdiction like X, Y, or Z are likely to be able to form an interest group; we are still maintaining that the home-owning median voters are in charge. Rather, any one of these jurisdictions will be able to internalize some benefit from the developments that give rise to the demand for new housing. Some of the suppliers to the housing industry may live in X, and some workers who would be employed in the new businesses or in the housing development will be voters in X. Thus, opponents to the new housing development will find that some members of their community will actively favor the new development. One can hardly predict any particular political outcome, but it seems safe to say that the housing developer will be treated more charitably in one of the communities X, Y, or Z in the Concentrated MSA than in A or B or C or . . . or P in the Fragmented MSA. It will not be as smooth a ride for the developer as in Isolated City Q, but I am assuming now that the developer does not have the option of taking his business to Q or to any other MSA.

Intermetropolitan migration of business might temper the decisions of any of the areas considered here, but I have proposed that the only jurisdiction that can effectively respond to that threat is the isolated small city, Q in figure 5.2. (The special case of the Monopoly MSA is discussed below.) Lonesome Q-burg does not require the cooperation of other jurisdictions to respond, as the other cities would. It also has more reason to be responsive. Small cities are numerous and less specialized in their economic activities and are thus more vulnerable to migration of footloose firms.

Side Payments to Mitigate Growth Restrictions

The preceding discussion assumed that development interests and homeowner interests are battling over initial entitlements to develop land. These entitlements are the on-the-books regulations that cannot quickly be changed in the face of unwanted development. The focus has not been on *exchange* between those parties or their representatives. There has been some implicit exchange, as when a homeowner thinks in her own mind that she might be willing to give up some neighborhood amenity—that nice open field across the street—to improve the chances that her son will get a job in the area. Economics, though, is mostly concerned with interpersonal exchange, as when Jonetta agrees to maintain Kevin's garden for a monetary fee or some goods in kind, say Kevin's shoveling her sidewalk in the winter. It is these exchanges that mitigate all the antidevelopment positions.

Consider the following hypothetical, which uses the story of Loudoun County as a fanciful example. During the period of 2000 to 2004, an antidevelopment coalition of elected supervisors made it difficult to develop. The supervisors downzoned (made more restrictive) much of the open space, they declared moratoriums on water and sewer lines that would make development possible, and they expanded the definition of wetlands to make much land undevelopable. But what the county supervisors can do, they can also undo. If developers were so inclined, they could pay to get the lots rezoned, build the water and sewer mains themselves, and create wetland reserves to offset their filling-in those on which they sought to build. The land use regulations on the books just represent the beginning point of a bargaining process.

Such deals do not have to be illegal or even shady. The money for the rezoning can go into the county treasury and used to lower taxes or for spending on whatever the county wants. If such deals can easily be made, the rate of development in Loudoun County should not have been much lower during the 2000 to 2004 reign of the antidevelopment party than it was before or after. One might suspect that the money that the development industry spent to buy (in this utterly fanciful scenario) the 2004 election was simply a smaller amount than it was costing to buy back the development rights when the antidevelopment board was in charge. The developers, of course, would rather have development entitlements for free, but we usually do not assume that a developer who has inherited money builds more than one who has to borrow.

The preceding analysis is also fanciful because such exchanges as I describe are actually quite costly to make. It is not the entitlements themselves that are at issue; it is the cost of making the transactions that is the barrier we are concerned with. I have in several previous works (Fischel 1985, 1995, 2001) described the costs that retard transactions in land use permits: lack of knowledge about reservation prices; the endowment effect, which makes people reluctant to trade what they already possess; risk aversion by homeowners; legal impediments

on contract zoning; the inefficiencies of barter exchange; rent-seeking by other-wise unaffected parties; moral indignation; and just plain spite. The issue that is relevant to this inquiry is why these transaction costs might be larger in the Fragmented MSA than in the Concentrated MSA.

One answer might be the greater degree of specialization in government in larger cities. The democratic virtues of the small town can be a drawback in bargaining with that small town for development permissions. Citizen planning has its virtues, but the involvement of numerous parties in negotiations surely adds to the cost of getting to an agreement. A larger unit of government usually channels the process through more predictable and professional lines of review. The conditions might be as rigorous as they are in a small town, but the number of occasions that the developer has to agree to them is apt to be fewer. It is also probable that developers themselves can specialize in larger jurisdictions, with apartment developers knowing how to respond to different regulatory hurdles than might be faced by a developer of industrial property.

The more likely reason for larger cities' attraction to development is the aforementioned political and geographic considerations. Developers in large cit-ies can organize and influence elections and decisions more easily than those in smaller venues, so they start in a better bargaining position. They do not have to go so far in negotiations to get to a viable position. In smaller communities where the developers start from less advantageous positions, the road to a viable devel-opment is longer and deters more travelers. The extreme entitlements that some communities obtain (e.g., 25-acre minimum lot size) are especially problematic in land use because the first stage of development is apt to be the last stage of devel-opment. Intensifying land use after an area has become even lightly populated is much more difficult to do since the buyers of homes on multiacre lots are apt to be especially vociferous NIMBYs. It is for this reason, by the way, that private de-velopers of multistage projects always hold a majority of votes in the homeowner associations that they set up until almost all the lots have been sold (Reichman 1976). They worry that an early handoff to residents would allow the newcomers to alter subsequent development. Developers subject to public zoning cannot do so because of the one-person, one-vote rule (Nelson 1999).

Monopoly Power's Ambiguous Effect on Zoning Politics

Another effect of jurisdiction size is its potential to confer monopoly benefits on the community. Such a community is represented by the Monopoly MSA in figure 5.2, where R is the sole unit of government in charge of land use regula-tion. Unlike the isolated small city represented by Q in figure 5.2, New R City does not have close substitutes to which developers and residents could locate. Demand for location in R is somewhat inelastic, which gives the opportunity for those who control the gates to extract some monopoly benefits. The main issue is who will get those benefits.

Entry into the development business is sufficiently easy that developers themselves could not take advantage of a public monopoly. To put it bluntly, if one developer can buy a city council's approval, others can, too. Existing homeowners are more likely candidates for monopoly benefits. The gain from monopoly control of development arises from making competition for existing homes more scarce in their market. The scarcity has nothing to do with the benefits of open space preservation or lesser road traffic; it is simply that there are fewer sites available. Another potential source of monopoly rents to homeowners is larger side payments, such as jacked-up exactions and other side payments from developers, which can be substituted for local taxes. The aforementioned transaction costs plus some judicial restraints on the scope of exactions tend to limit this source of monopoly rents, however (Fischel 1995, 347).

Communities in the Fragmented MSA cannot take advantage of monopoly rents because developers and home buyers can go to alternative communities in the same market. Monopoly in the isolated city (Q in figure 5.2) is limited by the large numbers of other small cities that employers can choose from. Therefore, it is the Concentrated MSA in which monopoly inclinations might arise. Jurisdictions X, Y, and Z might each have some monopoly power, and their mutual agreements to limit development are more easily entered into, which would make them more like the R government in the Monopoly MSA of figure 5.2. Such agreements would not be illegal, as they would be in the private sector under the Sherman Antitrust Act. The judicial application of antitrust law to local zoning decisions was deflated by the U.S. Congress in the early 1980s and was entirely discarded by the U.S. Supreme Court a few years later (Kinkade 1992).

It seems to me that monopoly gains are the most plausible reason for the empirical observations on the far right side of figure 5.1, which contradict my basic hypothesis that fragmentation produces exclusion. These urban areas (Baltimore, Memphis, Salt Lake City, Orlando, New Orleans, and Miami) have a high concentration ratio but also have very low elasticity of supply, which I take to be the result of stringent regulations. The reason is that concentration is so great that a single unit of government controls most of the developable land.

For a single jurisdiction that controls a large amount of a growing MSA's territory, the gains to existing homeowners from stringent development restrictions are not just the creation of amenities. The added scarcity value for the home they own goes on top of that. This prospective monopoly value helps overcome the greater organization problems that homeowners have in larger jurisdictions. More is at stake for homeowners than just the quality of their neighborhood. Someone seeking office in a large county can appeal to homeowners not only by promising to protect their neighborhoods from inroads, but by promising to make sure that housing developments that would not affect their neighborhoods directly will not be built and thus maintain the scarcity of their homes.

Econometric studies of monopoly zoning started with Bruce Hamilton (1978), whose evidence suggested the widespread existence of monopoly power.

I found Hamilton's data to be flawed and presented evidence that the monopoly effect was limited to a few highly concentrated metropolitan areas (Fischel 1980). This view is generally consistent with my interpretation of figure 5.1 here. My results are generally supported by subsequent studies by Louis Rose (1989) and James Thorson (1996). Monopoly zoning seems to exert an independent effect only in a few highly concentrated metropolitan areas.

I had at one time been skeptical of the monopoly-zoning explanation because I have never heard an elected official utter anything that seemed consistent with it. Candidates do not usually run for city council or county supervisor on the platform of "let's make housing more expensive so we insiders will profit more." They talk instead about the environment and quality of life and small-town character and even, at the end of a long list of goals, "affordable housing." But I have since noticed that almost no industrial cartel sees its goals as simply restricting supply to raise price and profits. The organizers want the market to be "orderly." They want to preserve "product quality." They want to ensure that "high cost" producers can "stay in business." Consumers, they say, will ultimately be better off for their farsighted activities that forestall "destructive competition." International cartels for diamonds and petroleum, as well as many domestic seekers of government protection, offer these and many other rationales for monopoly behavior.

Nor are nonprofit organizations immune from self-delusion on this matter. I was in the 1970s a faculty-committee observer of the erstwhile cartel that coordinated financial aid awards to students among Ivy League and other selective colleges and universities. The "overlap group," as it was called, sought to ensure that no institution offered more financial aid (i.e., a lower price) to prospective applicants than another. My first reaction as a naive assistant professor was, Isn't this an illegal price-fixing scheme? It was carefully explained to me that this system was for the good of the students and that the universities were hardly profit-making monopolists. Years later the antitrust lawyers at the U.S. Justice Department took notice and induced the overlap group to desist from sharing information about financial aid. (For details and a partial defense of the process, see Hoxby 2001.)

Returning to zoning, it should be noted that local political candidates invoke the benign-sounding goals that monopolists might use even in competitive markets like those in the Fragmented MSA in figure 5.2. What makes cities in a highly concentrated MSA different is that the voters who own homes have better reason to pay attention to such claims. If housing prices have ticked upward in a monopoly community, homeowners, including especially those who most recently purchased homes, have a strong reason to pay attention to overall growth controls. Residents of communities in the Fragmented MSA also gain from higher metropolitan housing prices, but there is not much that any single community can do to shore them up. Each jurisdiction has only a small fraction of the land area, and so additional restrictions whose sole purpose is to prop up housing prices will not work. (The cynical might suggest that support for metropolitan-wide growth legislation is the product of homeowners in fragmented MSAs

who realize that only such concerted regulation can offer them the monopoly gains.

One difficulty with this theory is that this same monopoly price helps development interests overcome their free rider problems, too. As prices for home sites rise, developers are willing to pay more to pry more of them loose from regulatory restrictions. Both forces (homeowner restrictions and developer expansion) cannot simultaneously prevail. Thus, the scenario of highly concentrated MSAs is likely to be characterized by wide swings in regulatory regimes. Sometimes the homeowners will dominate; at other times developers will call the shots. Such swings seem to have characterized Loudoun County and some other counties in the Washington, DC, MSA. When the homeowners get control of land use governance, the restrictions are likely to have even greater effects than they would in a fragmented MSA. A slow-growth policy in a large suburban county promotes especially high housing prices because developers have fewer alternative jurisdictions with which to deal. Fragmented MSAs have many communities. Each of them will be difficult for developers to dominate, but they can at least make deals, and some communities are more willing to deal than others.

This "pillar to post" regulatory regime of monopolistic suburbs may explain the wide variation in elasticity of supply of MSAs on the far right side of figure 5.1. Consider the three Florida MSAs represented there. All are highly concentrated, mainly because county governments control most exurban zoning decisions. Miami, which is mainly Dade County, had the lowest elasticity of supply of the entire group presented by Green, Malpezzi, and Mayo (2005), whose estimates I used. Miami's supply elasticity was actually negative over the period they examined. One contributor to this low elasticity was the urban growth boundary that the county established during this period. Many cities have urban growth boundaries, but for most of them, the boundary's only effect is to create "leapfrog" development patterns, in which developers who would have located in the rural parts of city G (to refer to figure 5.2's Fragmented MSA) simply move out to city D or some other jurisdiction. But an urban growth boundary in Monopoly MSA, such as one that might be established in jurisdiction R in figure 5.2, leaves developers with fewer options.

By the same token, when developers get the upper hand in a jurisdiction with a large amount of developable space, the effect on metropolitan housing supply will be much more expansive, which may account for the extreme variation in housing supply elasticity among the Florida MSAs in figure 5.1. Miami-Dade may have been in the grip of an antidevelopment crowd, while the developers may have been in control in the Tampa MSA (mainly Hillsborough County) during the period.

State and Judicial Protection of Development Interests

This chapter so far has dealt solely with the structure of local government as if local government were completely autonomous. Local governments are

everywhere "creatures of the state," and local (and state) land use decisions are reviewable by state courts. The federal government has only one city, Washington, DC, and federal courts have been loath to intervene in local land use matters, so supervision of zoning has been the province of state legislatures and state courts. Federal environmental regulations affect urban land use, of course, and in general they have tended to retard rather than promote development. But because their application is uniform across the country, federal regulation is not a good candidate to explain national variations in metropolitan housing supply.

State governments have done little to encourage local governments to increase housing supply by relaxing regulations. This is because state governments are historically more creatures of local governments than vice versa (Burns and Gamm 1997). If a state court invokes the hoary principle called Dillon's rule (named after Judge John Dillon [1871], whose treatise on municipal law predated zoning) and strikes down some local zoning innovation because it was not explicitly authorized in state legislation, the locality's delegation to the state legislature will usually remedy that deficiency (Libonati 1993, 18). Legal scholars observe the first step (the judge's decision) but not the second (the legislative correction), and so debate about the jurisprudential merits of Dillon's rule is kept alive even though its practical effects on municipal autonomy have been negligible since zoning became widespread in the 1920s.

Very few states have attempted to override local zoning decisions about housing. The most notable exception is Oregon, whose metropolitan land use boards can strong-arm local governments into rezoning for higher densities (Knaap and Nelson 1992). Oregon's problem is that the same boards also stringently limit outward growth of suburban development, so its net effect on housing prices is not clear (Mildner, Dueker, and Rufolo 1996). Almost all the other statewide zoning interventions retard housing supply rather than promote it. The state-promoted interventions have simply added another layer of review at which the developer can get tripped up (Popper 1988). A developer can go from "yes" (at the local level) to "no" at the state or regional level, but cannot go up the same ladder from "no" to "yes." A possible exception was the spate of state legislation in the 1990s whose intent was to improve developers' positions in regulatory takings controversies. Steven Eagle (2005) keeps tabs on the legal aspects of this movement, but I have seen no persuasive examination of their economic effects.

Two other attempts by state governments to override local decisions have focused on low-income ("affordable") housing rather than overall supply. Massachusetts has an "antisnob" zoning law that requires communities to have a certain mix of housing units, and New Jersey, in response to the *Mt. Laurel* exclusionary-zoning decisions, has a similar requirement (Fischel 2001, 272). The drawback of these otherwise admirable thrusts is that both let the community off the hook once it has certified a minimum *fraction* of its existing housing stock as affordable. The incentive for such communities thereafter is to do their best to retard *all* housing development so that they will not be out of compliance and thus subject to another round of costly obligations. New Jersey and Massa-

chusetts have both had their programs in effect since the 1980s, and there is no evidence that housing prices have become more affordable as a result (Mitchell 2004). Both states also share the distinction of having more farmland preservation programs than any other states (Kotchen and Powers 2006).

The more traditional resort for developers who are aggrieved by local zoning decisions is to go to the courts. A great deal has been written about the regulatory takings doctrine, which would seem to be a considerable aid to developers. Under this doctrine, a community that downzones a parcel just as it becomes ripe for development is thought of as taking at least part of the property without the just compensation that is required by the Fifth Amendment of the U.S. Constitution as well as all state constitutions. Although this doctrine was hailed as a great boon to development-minded landowners and a bane to open-space preservationists, little has come of it. The U.S. Supreme Court's pronouncements about this have generated much commentary, but it seems clear that the Court is not willing to push aside its traditional deference to state laws about property and articulate clear rules for when a regulation verges into a taking. No state court has taken up this challenge, either.

That is not to say that state courts never help aggrieved developers. Pennsylvania and Illinois are two states whose courts have for some time been willing to assist aggrieved developers (Coyle 1993; Mitchell 2004). The real outlier among the state courts, though, is California. Since about 1970, the California Supreme Court has been regarded by both developers and environmentalists as the most antidevelopment of all major courts. Prior to 1970, California's rules were similar to those of most other states except perhaps Pennsylvania and Illinois. The rule was that "the municipality never loses." This rule sounds antidevelopment, but one must consider that there are municipalities that are prodevelopment, and even many that are antidevelopment can be persuaded by various side payments to allow some development. After 1970, however, the California Supreme Court altered many doctrines that had worked to a developer's advantage or facilitated the deals between developers and communities. The rule that emerged can be summarized as "the developer always loses," regardless of whether local authorities favor or oppose the deal.

The main evidence for the California court's change is an extraordinarily detailed project carried out by a group of UCLA law professors, DiMento et al. (1980), whose work I reviewed and supplemented in Fischel (1995). An alternative explanation for California's antidevelopment stance could be the voter initiative. Gerber and Philips (2005) demonstrate that urban growth boundaries adopted by local voter initiatives in California are more stringent and more difficult to modify than ordinary legislative regulation. But there are reasons to be skeptical about the importance of initiatives in this regard. Local initiatives are widely available in other states, even in states in which statewide initiatives are not used, so California local governments are not especially unusual. California's initiative began early in the twentieth century, well before the state became known for its hostility to development. (A U.S. Bureau of the Census study [1969, 143] found that West

Coast housing values were about the same as the national average in the 1960s.) Nor is it clear that the initiative always works against development. Prodevelopment forces can use the initiative to their advantage when faced with a NIMBY-influenced local legislature. I would not dismiss the role of "ballot-box zoning," as it is decried in the legal literature (Callies, Neuffer, and Calibosco 1991), but one needs to examine the larger political situation before assuming that it is more important than jurisdiction size in determining land use decisions.

My reason for this diversion into the politics of state judicial systems is to explain the special role of California MSAs in figure 5.1. Four of them are represented: San Francisco, San Jose, Los Angeles, and San Diego. All are on the low side of the supply elasticity estimate for the (moderate) degree of fragmentation of their school districts. (School districts in California usually do not correspond to municipal boundaries, but the size and spatial distribution of school districts do seem to be similar to those of the municipal and county territory that they share.) The especial low elasticity of supply in the California MSAs is the result of the extraordinary antidevelopment stance of the California courts. Rather than being the defenders of property rights or even neutral arbiters, most observers of the California courts regard them as committed adversaries to almost any intensive land use development.

Conclusions and Policy Implications

The picture in figure 5.1 broadly confirms the chief hypothesis of this chapter: Metropolitan areas with more fragmented government structures—many small suburbs—are more likely to have stringent development restrictions, which reduce the elasticity of supply of housing, than are other metropolitan areas. MSAs whose local government structure is characterized by fewer and larger local governments respond to increased demand for housing with larger amounts of housing, not just increased prices. The chief reason is that in larger jurisdictions developers can bring more political clout and homeowners have a more difficult time organizing.

MSAs whose land use is controlled by very few jurisdictions, however, appear to be subject to the monopoly zoning effect. Even if antidevelopment forces do not consciously think that they are promoting a monopoly, the extra boost to the value of already-established homes makes it more likely that homeowners will overcome the free rider problems of political participation in large jurisdictions. The other qualification to this account is that the courts can make a difference, as can be suggested here by a negative example. Prior to 1970, California was not an expensive place to live. During the 1970s, California's housing prices shot up to a permanently high plateau, higher than almost anywhere else in the country (Quigley 2007). How much of that can be attributed to the judicial downgrading of developers' rights cannot easily be estimated, but it is difficult to ignore the role of the courts in making California a much more costly place to live.

I have been writing about land use regulation and local government since the early 1970s, and one lesson from experience is that there are no quick fixes to the problems of regulatory excess. Indeed, most policy debate has been fixated on how to increase regulation, not decrease it. For this reason, my own policy recommendations would focus on mitigating opposition rather than simply running over it with new laws and legal doctrines.

An important reason that homeowners are so concerned about development in almost any jurisdiction is that they have no way to insure against adverse outcomes to their property values. Homeowners can insure against fires that destroy their building, but they cannot insure against the adverse effects of neighborhood decline. Opposition to even benign development thus often spirals out of control. I have suggested that homeowners' anxieties might be controlled by offering home-value insurance (Fischel 2001, 268). There are a few instances of that being done, but a better-organized market is necessary for the idea to have much effect on development. The reason for the lack of an organized insurance market is not entirely clear. It should not be assumed, however, that just because there is no market, it is inefficient to develop one. As Robert Shiller (1993) has pointed out, markets for many risks have been developed in recent years.

A home-value insurance market could go some distance to assuaging the forces that line up against development interests. It would also make it easier for developers to acquire entitlements by lowering the transaction costs of bargaining. Instead of having to perform specific, often unnecessary, mitigation programs, developers could simply purchase home-value insurance for nearby community residents. Home-value insurance does have its downside in the form of adverse selection and moral hazard (Shiller and Weiss 1994). It would probably take some public funds to create a viable market, but it might be worth it. The tendency of suburban land use regulations to repel new development has large costs that require creative approaches to deal with.

APPENDIX: DATA FOR FIGURE 5.1

The four-district concentration ratios in table 5.1 below are from Battersby and Fischel (2007), for Urbanized Areas in 2000. The housing supply elasticities in table 5.1 are from Green, Malpezzi, and Mayo (2005) for the period of 1979 to 1996. The mismatch between dates is not important because school districts in urban areas are quite stable, and 2000 UA boundaries are always within the borders of earlier MSA borders. Three of the Green, Malpezzi, and Mayo MSAs were excluded because Battersby and Fischel did not have concentration ratios for them. Those omitted are Fort Lauderdale, Honolulu, and Syracuse. Note that Green, Malpezzi, and Mayo omitted New York and several other large MSAs (e.g., Cleveland, Seattle, and Sacramento) for lack of data about land use regulation, which were assembled by Malpezzi (1996).

Table 5.1
Sample Cities for Figure 5.1

MSA	Four-District Ratio (percent)	Supply Elasticity
Akron	38.0	6.64
Albany	36.2	1.55
Atlanta	54.0	21.60
Baltimore	96.9	5.52
Birmingham	85.3	5.33
Boston	8.5	1.77
Buffalo	31.1	2.84
Charlotte	99.4	17.00
Chicago	19.4	2.48
Cincinnati	33.9	8.25
Columbus	54.0	13.50
Dallas	41.3	29.90
Denver	69.8	11.40
Detroit	23.0	4.74
Grand Rapids	46.5	10.80
Hartford	22.7	2.85
Houston	46.1	12.80
Indianapolis	35.4	11.00
Kansas City	41.9	11.00
Los Angeles	40.4	3.73
Memphis	98.4	5.63
Miami	100.0	−0.30
Milwaukee	40.2	4.45
Minneapolis	28.8	4.21
New Orleans	98.6	0.06
Oklahoma City	68.8	13.70
Orlando	100.0	4.50
Philadelphia	19.7	3.09
Phoenix	48.8	21.70
Pittsburgh	17.1	1.43
Portland, Oregon	44.8	7.14
Providence	22.3	2.10
Rochester	42.5	5.25
Salt Lake City	100.0	4.69
San Antonio	76.0	8.23
San Diego	64.9	5.33
San Francisco	48.2	0.14

Table 5.1
(*continued*)

MSA	Four-District Ratio (percent)	Supply Elasticity
San Jose	66.8	0.33
St. Louis	26.5	6.89
Tampa	100.0	27.40
Toledo	60.2	0.83
Tulsa	77.1	8.25

Sources: Battersby and Fischel (2007); Green, Malpezzi, and Mayo (2005).

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