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## Truly Smart Growth

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## Truly Smart Growth

### Abstract

Editors Note: The following articles by Professor Mills and Ed LeClear, a Cornell graduate student, both address a very contentious issue currently in debate among real estate developers, planners, and governments: Smart Growth and Suburban Sprawl. In the Graduate Program in Real Estate at Cornell, every student is tasked with completing two major project developments, one in the first year, and the other in the second. This year's first year students planned a development on 858 acres in Pennsylvania. An undercurrent of discussion among the students was whether this relatively large property in a basically rural environment should be developed or if the development of it simply contributed to more sprawl. This question was made more poignant by the fact that the city of Philadelphia, was the only major city in the country to experience a decline in population during the 90's, as more and more individuals moved to the inner and outer suburbs consequently expanding suburban development boundaries. Professor Mills' article addresses this very issue in the first article from a decided viewpoint. Ed LeClear presents a different perspective on the issue. We encourage you to respond.

### Keywords

Cornell, real estate, smart growth, suburban sprawl, residential development, suburbanization, Philadelphia, city planning, income inequality

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## Truly Smart Growth

*Eduin S. Mills, Professor Emeritus of Real Estate and Finance, Northwestern University*

For at least thirty years we have heard complaints about suburban “sprawl” from some in the ranks of urban planners, environmentalists, and public transit advocates, among others. These observers have urged government actions to reverse, stop, or at least slow suburban growth. Much of their literature and rhetoric has been provocative; the very use of the term “sprawl” casts the idea of growing suburbs in an unfavorable light. (The non-pejorative term “suburbanization” is used in this discussion.)

Academic economists have weighed in on issues *relating* to suburbanization. Their most important contributions have been in the areas of metropolitan location and spatial analysis, local government tax and expenditure analysis, and the analysis of interactions between metropolitan transportation and spatial issues. Yet, remarkably, academic economists have written almost nothing on the general government policy issue of allegedly excessive metropolitan suburbanization<sup>1</sup>. This article presents the case for suburbanization from an academic redoubt.

The fact that much of the literature opposing suburbanization is written within the Washington beltway is suggestive, but does not make the claims either correct or incorrect. Many DC-based organizations have issued negative reports and pamphlets on suburbanization. Typically vituperative is the Surface Transportation Policy Project<sup>2</sup>. Beyond doubt, Anthony Downs is the intellectual leader of the anti-suburbanization group; for his views see his Brookings Institution publications cited in the reference page.

### **What Should Concern Us?**

In the outdated traditional view, central cities serve as our major population and employment centers, with suburbs playing a minor supporting role. An economic definition of *suburbanization* is a reduction in the fraction of a metropolitan area’s population or employment that is located in the central city (corresponding to increased activity in surrounding suburbs). Many such relationships have been estimated for large numbers of historical years and metropolitan areas throughout the world. (Occasional corrections made when central city boundaries change do not alter the important conclusions.)

There is no question that recent decades in our country have been characterized by higher population and employment growth in the suburbs than in the central cities. The substantive issue is whether this growth has been *excessive*. Suburban growth would be excessive if it imposed higher costs on society than would corresponding central city growth—that is, if the growth were occurring in the wrong places. If so, then our efforts should be directed toward identifying the excess costs that suburbanization creates, and the appropriate government response, with appropriate economic tools.

It is unfortunate, therefore, that today’s anti-suburbanization literature is hardly ever written in the context of modern welfare economics. We have learned how to analyze the social efficiency of resource allocation in competitive markets through half a century of extremely careful studies, and private suburban land markets in US metropolitan areas are certainly

regulation of externalities, or from other failed government policies. I have presumed, in writing this article, that any suburban land misallocation is the result of a mispricing of resources. This mispricing, in turn, results from the ineffective regulation of externalities, or from other failed government policies.

### **A Brief History**

Suburbanization is not the shocking new development that its opponents seem to profess. This growth has been occurring in metropolitan areas the world over for at least 40 years; it has proceeded in the US for 75 or 100 years. I have never seen a careful study that reported findings to the contrary among the dozens that have appeared on the subject.<sup>3</sup> In US metropolitan areas, some 57% of population and 70% of employment were located in central cities in 1950; by the mid-1990s the figures were 30-35% and 40-45%.<sup>4</sup> US metropolitan areas have suburbanized farther and faster than those in most countries (London and Moscow are dramatic examples of highly suburbanized non-US metropolitan areas). The pervasiveness and persistence of suburbanization over long time periods and among countries with very different government and private institutions indicate that suburbanization results from powerful forces and is, presumably, deeply embedded in the urban growth process. Suburbanization's critics might show some humility.

In the US and elsewhere, suburbanization has been associated with subcenter formation, especially during the last thirty years. Subcenters are mostly smaller downtown-like clusters of jobs that have located away from larger cities' central business districts (CBDs). The composition of employment in subcenters is similar to that of CBDs, although subcenters may contain some manufacturing (there is almost none in CBDs) and offer fewer elite cultural facilities (symphony, opera, high quality restaurants). Subcenters also exist in non-US metropolitan areas. They may be fewer and smaller abroad, since non-US metropolitan areas tend to be more centralized than their US counterparts. We should note that subcenters are not well documented in most countries.

### **Reasons for Suburbanization**

While serious scholars may dispute the relative importance of factors that cause suburbanization, there is general agreement as to reasons *why* we suburbanize. One important reason is size; large cities are more suburbanized than small ones the world over. It would, of course, be almost impossible, and certainly expensive, to locate most of a large metropolitan area's employment in or near its CBD. Think of the time and money cost of providing housing and the transportation infrastructure to move workers between residences and jobs. Even in a midsized (1-5 million people) metropolitan area, several small subcenters are more efficient than one large CBD. (Garreau's term "edge cities" is not quite synonymous with

subcenters; many subcenters are not cities and many are not at the edges of metropolitan areas. However, his dramatic case studies are instructive.)

A second reason for suburbanization is high income. High income metropolitan areas are more suburbanized than low income ones, a result that can be documented within the US, but more dramatically by international comparisons. The easy explanation is that high income residents demand large quantities of housing, and cheap land for large houses is available away from central cities. (The correlation between family income and the home's distance from the CBD is strong within most US metropolitan areas. This relationship is less certain for areas outside the US, since few other countries report incomes in census data.) The suburbanization of employment and housing reinforce each other. Firms suburbanize if their workers and customers suburbanize, and residents suburbanize if jobs (and shopping centers) are predominately in the suburbs. Evidence indicates that jobs follow people to the suburbs more than people follow jobs.<sup>5</sup> Manufacturing is a separate case. US manufacturing has been moving from CBDs to outer parts of central cities, then to suburbs, and then to small metropolitan areas or even non-metropolitan areas for at least half a century<sup>6</sup>. The primary driving force has been the shift in freight movement from rail and water to road and, to a minor extent so far, air transportation. The revolutionary cause was the development of internal combustion and diesel engines, refrigeration, and modern highways. These innovations made it economical to produce in suburban locations – free from high land prices, congestion, strong unions, high taxes, and burdensome regulations – while shipping inputs directly from, and outputs directly to, distant areas. There can be no doubt that the result has been enormously beneficial. Manufacturing dispersal has been little influenced by, but probably has promoted, population suburbanization. Chicago's Mayor Daley, and other large city mayors (and their planning organizations), have been loath to shed the fantasy that they can attract manufacturing back to the central cities. Although manufacturing is a thriving and crucial sector of the American economy, it has not been a source of substantial job growth, either nationally or in the Midwest region, for several decades. It will certainly not be a source of job growth in central cities during the careers of people currently serving as government officials.

### **Irrelevance of Inner City Problems**

Suburbanization's pervasiveness indicates that it does *not* result mainly from parochial post-World War II US central city problems, such as race. Indeed, our metropolitan areas were suburbanizing long before the massive postwar migration of minorities to the cities. It is beyond dispute that racial minorities, poverty, and crime are concentrated in central cities; and some evidence indicates that the fraction of jobs and residents located in suburbs has grown as minorities, poverty, and crime have become more concentrated in central cities. Yet it is almost certain that social issues affecting the

central cities have had a greater effect on *who* lives and works in suburbs than on *how many* live and work there.<sup>7</sup> Indeed, during the 1980s and 1990s African Americans and Latinos have been moving to suburbs in record numbers, in Chicago and elsewhere (despite some suburban governments' efforts to keep minorities – and the poverty and crime feared to accompany them – in the central cities). The migrants are mostly not poor; their socioeconomic characteristics are much like those of whites who moved to the suburbs in droves starting about forty years ago.<sup>8</sup> It is ironic that more housing has been built and rehabilitated in Chicago (and some other cities) during the prosperous years since 1993 than was built over many previous years. Some housing professionals feel that growing numbers of the large cohort born between 1950 and 1965 are becoming “empty nesters” and moving to increasingly safe and leisure-oriented central cities, some from suburbs they had seen as attractive places to raise their children.

### **Transportation's Important Role**

Modern economic activity requires specialization, and specialization requires the movement of people, goods, and information. People and goods are most efficiently moved within a metropolitan area, mainly because proximity between origins and destinations permits travel distances to be short, and high activity densities enable the transportation system to be used at close to design capacity. But a truly socially useful metropolitan area requires a transportation system that not only serves the intra-metropolitan area well but also connects with other places. One reason that economic activity in many Asian and African metropolitan areas is so concentrated is that transportation to other areas is poor, so firms and workers crowd into countries' few (or sometimes only) fine port cities despite astronomical rents and massive crowding.

The US has intra- and inter-metropolitan area transportation systems as fine as any in the world. In analyzing a transportation system we emphasize people's trips to work, which constitute a minority of intra-metropolitan trips but create the greatest stress for the system. A system that can handle work trips can handle any other demands placed upon it, at least if it has a large road-based component. About 90% of Chicago and other US metropolitan area work trips are made in private vehicles (mostly cars, but also motorcycles, bicycles, and taxis). An even greater percentage of non-work trips is by private motor vehicle, since most are either social (with enormous origin-destination diversity) or freight hauling (shopping trips, business goods delivery, etc.), for which private motor vehicles are the only practical modes.

The basic reasons for US reliance on auto-based commuting are high incomes, inexpensive land, vehicles, and fuels, and good roads. As noted, high incomes and low cost land are major reasons for metropolitan residents' moves into low density

suburbs. Add to these factors the dispersion of jobs into low density sub-centers, cheap gasoline, and a fine metropolitan road system, and the story is complete. Because work trips' origins and destinations are highly diverse, and the densities of suburban residential and employment centers are low, fixed rail mass transit tends to be uneconomical. A high quality modern highway with two lanes in each direction can handle about 16,000 vehicles (8,000 in each direction) during a two-hour commuting period (10,000 vehicles is more typical use in US metropolitan areas, since lanes are not used to capacity and travel is typically greater in one direction than in the other)<sup>10</sup>. A fixed rail transit line's capacity is at least 20,000-50,000 passengers per hour in each direction. (In Tokyo, up to 75,000 passengers travel in one direction during a rush hour on busy subway lines.)

US metropolitan areas can not provide requisite densities for fixed rail commuting without massive and artificial restructuring. In our country, almost no fixed rail commuter lines cover operating costs, let alone the much larger capital costs. At low intensity use, a fixed rail system is prohibitively expensive. No careful study has indicated that social benefits exceed costs for any of the fixed rail commuter lines built in US metropolitan areas during the last 35 years.

Buses are another matter. A nearly full express bus traveling at highway speed can compete with private cars in both money cost and travel time, if the driver can pick up and discharge passengers without making many stops. In contrast, a *local* bus making 4-6 stops per mile can not compete with cars in terms of speed or time and money costs, no matter how nearly full it travels. Most passengers on such buses either can not afford cars, place low value on travel time, or make short trips to CBD work places where parking is expensive.

Express buses can be economical because service is divisible and rights-of-way can be shared with private motor vehicles. Filling a bus in only a few stops at residential origins requires frequent service, to keep waiting times short. An important issue is whether suburban residential areas can provide enough passengers to fill buses with few stops at 5-10 minute intervals without requiring more than about 10-minute walks and waits, for two morning hours. An express bus that must share crowded highways can suggest reserved lanes. Efficient use of a reserved bus lane requires more than 200 buses during the two-hour commuting period. If use of the reserved lane is light, other lanes are even more crowded, and car users complain bitterly. Reserved bus lanes have been used with some success, notably in southern California. To compete with cars, express bus service must be well planned, and must operate in an environment favorable to bus commuting.

### **Benefits and Costs of Suburbanization**

The benefits of suburbanization are great; tens of millions of people have been



able to acquire inexpensive housing in pleasant, low density communities with fine schools, low crime rates, and recreation areas for children. Widespread car ownership provides great flexibility in choice of home and work locations without high commuting costs, and has provided flexibility in travel for shopping and social trips. In addition, suburbanization of both people and jobs has enabled large metropolitan areas to function efficiently, with no more than modest road congestion.

Why is there so much concern about the suburban pattern of US metropolitan areas? Most of the concern appears to relate to auto use, specifically regarding: *Subsidy* – People grouse that governments subsidize auto travel through road construction, maintenance, and operation outlays. While this claim is correct, there are misconceptions. Spending on roads is about equal to revenues raised from vehicle taxes (mostly fuel tax, but also excise taxes, registration fees, import duties, bridge and road tolls, etc.)<sup>11</sup>. We can not be sure, because so many diverse taxes and spending programs exist. Only the federal highway trust fund is dedicated to road expenditures. An irony is that, for a couple of decades, much of that fund has been used to subsidize fixed rail construction. Far from being free, road use is taxed at levels that approximately repay government spending on roads.

A second irony is that careful social benefit/cost studies conclude that most major highway investments' benefits *exceed* their costs. Yet I have seen no careful study concluding that any metropolitan fixed rail investment in the last 35 years had benefits anywhere near as great as its costs (DC, Atlanta, Baltimore, Dallas, and, worst of all, LA are examples). *Congestion* – Though we causally view *congested* as synonymous with *crowded*, a crowded public facility is congested in the economist's view only if the *marginal*, or extra, cost imposed on society by an added user exceeds the *average* cost. Average cost is the time and money cost that each user bears. Marginal social cost includes not only the cost that each individual user bears, but also the cost imposed on others by slowing their trips. While this explanation may sound paradoxical, it follows from the fact that travel speeds drop as traffic increases on a crowded road. The total added cost imposed on other users by each additional user may be several times the cost the added user bears. While each extra user slows traffic only slightly, that slight burden affects hundreds of other users.

The existence of congestion implies inadequate supply and/or pricing of travel facilities. If marginal social cost exceeds average cost, then the average cost to society rises with each new user. Much research has been devoted to ascertaining how to charge appropriate congestion tolls. The issue is not easily resolved; for example, a congestion toll that equates the price each user faces to the added cost imposed on society is optimum only in the short run, when transportation infrastructure remains fixed.

In private markets, an implied excess profit would induce capacity expansion. Governments should imitate the competitive response; transportation infrastructure should be augmented until average and marginal cost are equal, and the price of using a facility should be set equal to that cost. At that point, there is no congestion: the facility may seem crowded, but there is no excess of marginal over average social cost. The appropriate investment may be more roads, fixed rail systems, reserved bus lanes, or better traffic control. Only benefit/cost analysis of alternative plans can settle the issue.

As an example, road building is quite costly in built-up areas. Chicago's road system capacity could probably grow by about a third with the expenditure of a few tens of millions of dollars to improve traffic control (reverse direction and one way streets and lanes, timed traffic lights, enforcement of traffic rules, higher on-street parking fees, and abandonment of restrictions on private off-street parking). The benefit/cost ratio would be large. Spending billions to acquire land and build *new* roads would not be justified. *Environmental Costs*—Motor vehicles are often accused of being polluters. Yet new autos emit only about 15% as much waste gas per vehicle mile as the last uncontrolled cars, produced in the late 1960s. Cars with internal combustion engines do not discharge the two air pollutants known to have substantial health effects: sulfur and particulates. With existing technology, new car emissions could be reduced somewhat more, but the benefits would be modest relative to the costs. On the horizon for the next decade are technologies that will have much bigger benefits (fuel cells, dual engines, gas turbines, electric cars).

Old cars raise more serious problems. The oldest 20 or 25% of cars emit most of the auto pollutants. Federal law requires states to compel old cars to adhere to high standards, but they have not done so, presumably because old cars are driven primarily by low income residents. Diesel engines are even worse; they emit particulates, and emission standards are low. Everyone is aware of malodorous truck and bus emissions. Again, the need is for states to enforce reasonable standards. *Oil imports*—Some people complain that our dependence on cars and imported oil worsens our international balance of payments. But exchange rates today are mostly set by markets; these markets equilibrate international supplies of and demands for goods, services, and money assets. Our balance of payment deficits on current account mean that foreigners find the US a good place to invest. There is no merit to proposals to control oil imports for balance of payment reasons.

More worthy of our fear is unreliable foreign petroleum sources. We have had two interruptions of foreign oil supplies, 1973-74 and 1980-81. A third politically motivated major reduction in foreign oil supplies seems unlikely. OPEC is weaker, foreign sources are more diverse, and we have an emergency reserve; but I can not judge the

adequacy of such protections. *Farm land* – Some observers worry that suburbanization absorbs land that we will need to grow food and fiber in the future. That problem is unlikely to arise; we now have about as much land in crop production as we had 50 to 75 years ago, and irrigated land has replaced land absorbed by metropolitan areas. We grow much more food than in the past, far more than we consume; indeed, agriculture is a major export sector. We could produce even more by abandoning federal restrictions, and by farming more intensively to achieve the rapid increases in output per acre of which our farmers are capable. There has been no prediction of a US food shortage in any responsible study, at least since the early 1970s.

### **Government Policy Toward Car Use**

Our federal government has made intermittent attempts to reduce car use in metropolitan areas. Subsidies for rail transit, buses, and carpooling experiments are the most common federal actions. Attempts at physical control have included restrictions on parking facilities at workplaces. Yet most government policies have wasted money, imposing minor inconvenience on workers while having no measurable effect on auto commuting. It would indeed be unforgivable to impose severe controls on commuting by car without accompanying massive improvements in metropolitan public transit systems.

Nevertheless, motor vehicle use in metropolitan areas is vastly underpriced. The argument is quite simple, and it has little to do with congestion. Congestion is limited to a small percentage of metropolitan driving, and is very difficult to price in a precise way. The appropriate price to charge for road use is the long run marginal cost of providing roads, which would be about equal to average cost if capacity were expanded appropriately. This price is the long run competitive equilibrium that government policy should imitate, as discussed in the prior section. Both optimum pricing and optimum capacity expansion are required. The appropriate price is the opportunity cost of using the land; plus the replacement cost of the produced assets (road ways, bridges, tunnels, *etc.*); plus the costs of maintaining, repairing, and operating the roads. These costs must be annualized and put on a vehicle-mile basis.

But there is no perfect way to collect such a fee. Electronic metering of road use is the favorite of technologically-minded commentators; its advantage is that the charge can be varied by detailed vehicle characteristics (*e.g.*, weight), by location, and by traffic volume. It is costly to set up and operate, however, and is subject to evasion, avoidance, and sabotage. Each vehicle would need an electronic device so that a charge could be recorded (possibly on the owner's debit card) by contact with devices in roads in the system. Such charge systems might be practical on major

limited access commuter highways, but they would not likely be feasible on ordinary city streets.

### **Let's Talk About "Smart Tax"**

Much simpler would be a fuel tax. A uniform tax per gallon (different for diesel) would yield revenues very nearly proportionate to road use and vehicle weight. At-the-pump levies are extremely cheap to collect (less than for any other important tax) and almost impossible to evade. In principle, we can differentiate by where fuel is purchased, but not by when and where it is used. Whereas electronic pricing might be appropriate on major roads where vehicle congestion varies by time and location, an optimum fuel tax and optimum capacity expansion would *eliminate* most congestion (and any advantages of electronic metering).

How much would an appropriate fuel tax be?<sup>2</sup> Gasoline taxes (federal + state) now average about 20¢ per gallon, or 1¢ per car mile driven. A rough calculation indicates that a proper fuel tax would be ten times the present level: about \$2.00 per gallon, or 10¢ per car mile. In the early 1990s, the fuel cost of gasoline was about \$1.00 per gallon; tax made the retail price average about \$1.20. Raising the tax by \$1.80 would bring gasoline's retail price to about \$3.00 per gallon (still 50¢ to \$1.00 less than the price in almost every other industrialized country). This price would represent a 150% increase, but the total cost of travel would rise by considerably less; there would be less driving, so speed would increase and the time cost of travel would fall. (The time cost of travel is now about half of auto-based commuting cost.)

It might seem justified to make the fuel tax less for those who use less costly roads; it is much less expensive to build rural than metropolitan roads, since rural land has less opportunity cost. Yet the usage cost per vehicle mile is not much less, since rural roads are used much less intensively. In fact, a lower tax on fuel sold in rural areas would counterproductively induce urbanites to drive to rural areas to buy their fuel, and differentiating by state would be dangerous since many metropolitan areas are in or near two or more states. But it might be feasible to return part of the fuel tax through federal income tax refunds to those who neither live nor work in metropolitan areas.

What would be the effect of a dramatic rise in fuel taxes? A few people would walk, cycle, or take public transit. More people would gradually replace large cars with more fuel-efficient ones, as they did after the two fuel crises. A crude estimate is that my proposed fuel tax increase would reduce metropolitan driving by 15- 25%. I doubt that a higher fuel tax would induce much return of metropolitan area residents to central cities or inner suburbs; most of the reduced driving would be in suburb-to-suburb commuting. At present, thousands of Chicago area workers are in this situation: worker 1 lives in suburb A and works in suburb B, while

worker 2 lives in B and works in A (note that many suburban circumferential roads are about equally crowded in both directions during commuting hours). Not all suburbs or suburban work centers are alike, but many have good schools, similar homes, low crime rates, and good shopping centers. Driving is so cheap that housing choices are made on the basis of secondary considerations, which people would rethink if commuting and other car trips became much more expensive.

My 15-25% estimate of reduced metropolitan car travel is based on the assumption of fixed numbers of jobs and dwellings at all locations. Effectively, some people would just swap houses to locate closer to work. Of course, over a long period, there would be some increases in the densities of suburban employment centers, and of housing near employment centers. At present, local government land use controls are barriers to both effects. They *should* be relaxed anyway, but would *have* to be relaxed if we were to get the full benefit of reduced metropolitan driving. A further advantage of a more realistic fuel tax is that it might encourage the federal government to abandon its motor vehicle fuel economy standards. I feel that this proposed large increase in fuel taxes, along with better traffic control and modest physical road system improvements, would practically eliminate congestion for the foreseeable future, and the changes could be carried out in just a few years.

The most important problem with my proposal (or with proposals for any significant electronic congestion charges) is political. Americans dislike tax increases, and no elected official or government can guarantee that the higher fuel tax would be offset by a permanent reduction in any other tax. My proposed fuel tax increase would yield about as much revenue as local property taxes. Property taxes lead to inefficient investment decisions, and they are administered arbitrarily in Chicago and elsewhere, whereas higher fuel taxes would *improve* resource allocation. But it would be politically difficult to persuade voters that the abolition of property taxes would be permanent.

Expanding road capacity is another means of reducing car travel cost that is technically easy but politically difficult. Some road systems should be built or expanded, mostly in suburbs. In built-up parts of urban areas, road capacity is best improved by traffic management. Evidence here and abroad also indicates that existing fixed rail commuter systems could be efficiently operated through private management. Bus systems should simply be opened to private competition.

Although my proposals might slow suburbanization somewhat, their effects would not please the anti-suburbanization forces. Nor should they; governments' duty should be to get the prices right. Any effect on suburbanization would be incidental, and would probably be minor.

### **Smart Growth Controls**<sup>14</sup>

In recent months, “smart” growth has become popular with government and private groups, in Illinois and elsewhere. Despite much circumlocution, “smart” growth means physical controls on suburban expansion. My arguments against direct controls on suburban expansion are stated above. Suburban land use controls and federal methods controls should have shown people the results to expect from pervasive controls on suburban expansion. Governments invariably prefer direct controls to appropriate pricing policies, and much is known about effects of controls. But since stringent direct controls on suburbanization are relatively rare in the US, we must learn from other countries that have more experience.

The preface is that major parameters of housing demand equations are similar the world over. (Detailed parameters, such as demand for air conditioning, vary from country to country.) Numerous careful studies of housing demand have been carried out during the last two decades, many of them by or for the World Bank. Invariably, the income elasticity of housing demand is estimated to be between 0.75 and 1.0; in other words, people increase their housing consumption a little less than proportionately as their incomes rise. Housing demand is invariably estimated to be price inelastic; a 10% increase in cost per unit (a combination of size and quality characteristics) of housing leads to a 4 or 5% decrease in housing demand. US studies, which are the most numerous and the most reliable, fit this pattern.

Nevertheless, housing expenditure varies enormously among metropolitan areas around the world. Home value relative to the owner’s annual income is the most telling statistic, varying roughly from 2.5 to 3.5 in most US metropolitan areas, from 3 to 6 in Europe, and from 4 to 10 or more in some Asian metropolitan areas. For example, home prices are about 4 times owners’ annual incomes in Bangkok, Helsinki, and Toronto; 5 times in Amsterdam; 7 times in Cairo; 8 times in Delhi; 9 times in Seoul; 10 times in Munich; 11 times in Warsaw; and 15 times in Beijing.<sup>14</sup> What accounts for these dramatic disparities? Many things, of course, including population density, the adequacy of real estate property rights, the quality of the construction sector, and the stability and honesty of governments. But the most important explanation is government interferences with housing supply. Interferences include restrictions on housing location, design, and density. The most important restriction, however, is that most governments require legal permission to convert land from rural to urban uses. The most severe restrictions are in moderate income countries, whose urban populations are growing most rapidly. Some restrictions are in the form of “greenbelts,” where urban development is illegal on any terms. More common is severe limits placed on what we would call rezoning from rural to urban uses. Seoul and other Korean cities have greenbelts, but rezoning is severely rationed even outside these areas. Delhi and Bombay represent cases

in which government simply permits rezoning of very little land. In Toronto and other Canadian cities, rezoning is severely rationed. Moderately severe controls exist in nearly all European countries.

### **What's So Smart About Paying More?**

The result of controls on housing supply is high prices. In extreme cases, such as Delhi and Bombay, only the very rich can afford decent housing. Seoul's upper middle class residents must save for years to accumulate down payments on modest houses. Closer to home, Boulder, CO has established its own greenbelt around parts of the city; housing there is increasingly the preserve of the rich. Portland, OR is trying to do the same. An axiom is that when governmental limits on housing supply result in especially high home prices, governments blame "speculators," sometimes even putting a few large property owners in jail.

None of the foregoing proves that growth controls are a bad idea, although I believe that they are. Relatively stringent growth controls certainly make metropolitan areas more compact than they otherwise would be. The result is that metropolitan areas are more crowded and, in extreme cases, so congested that activity threatens to come to a standstill; Seoul, Bombay, and Bangkok are examples.

It is important to emphasize that controls inevitably make housing expensive. Canada is a persuasive example; Toronto and Vancouver are surrounded by unlimited amounts of cheap land, yet housing prices are 50% greater relative to residents' incomes than across the border in the US. The reason is simply controls on land use conversion. Seoul is a second persuasive case; in about 1990 Korea's government began to rezone land for development near Seoul much more rapidly than previously. The result has been a drop in the housing price/income ratio from 9 to about 5 within six years (until shortly before the Asian financial crises).

Land use controls contribute to home prices that are not only high, but unstable as well. Real estate prices in Tokyo have fallen about 75% during the 1990s; those in Seoul may have fallen about 50% during 1997, according to press reports in the two capitals. Vancouver's real housing prices rose, fell, and rose again by a factor of two from 1979 to 1990.<sup>15</sup> Prices were especially unstable in Southern California and Boston from the early 1980s until the mid 1990s. These areas have notoriously stringent land use controls. In Chicago, where the controls are much less stringent, housing prices changed little relative to the price level<sup>16</sup>

Land use controls make housing prices high by limiting supply. They foster price instability because the lengthy permit process slows builders' responses to demand increases in booms. Additional dwellings thus tend to come on the market

at the end of a boom or early in the subsequent downturn, thus exacerbating price decreases.

### **Who Gets Hurt the Most?**

Advocates of growth and compactness controls may believe that the benefits of such controls outweigh the costs. I have no idea what such benefits might be (and am unable to find a coherent argument that substantial benefits even exist). But advocates of controls should face the fact that an inevitable implication of the government actions they espouse is much more expensive and unstable metropolitan area housing. I worry about housing costs for everyone, but especially for low income families. It seems doubtful that any advocates of “smart” growth controls have considered what their proposals’ inevitable effects on housing costs would do to people with low incomes.

Truly smart growth would require governments to “get the prices right” for the services they provide. It would also require them to permit people maximum freedom as to where and how they live and create jobs.

### **Notes**

1. The only careful discussion of which I am aware is now two decades old; see Altshuler (1979).
2. See, for example, Dittmar (1995).
3. Among these studies have been a half dozen of my own; see Mieszkowski and Mills (1993).
4. Data are from Gaquin and Littman (1998).
5. See Carlino and Mills (1987).
6. See Carlino (1985).
7. At the same time, there is evidence that minority children find it harder to escape poverty, crime, and family breakdown as these problems become more concentrated in their neighborhoods.
8. See Mills and Lubuelé (1997).
9. See Small (1992).
10. See Small (1992) for a superb recent account.
11. Gomez-Ibanez (1985) offers a careful analysis.
12. The calculations that follow are from Mills (1998): they pertain to the early 1990s. Most of the underlying data are from Small (1992).
13. The substance of this section depends very much on Malpezzi and Mayo (1997), and on the fuller presentation in Angel and Mayo (undated).
14. These data, from Malpezzi and Mayo (1997), pertain to years near 1990.
15. Evidence is provided in Clayton (1996).
16. See Mills (1997).



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