

Metropolitan Development: Patterns, Problems, Causes, Policy Proposals

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The literature on urban development of the past decade (since about the mid-1990s) has been characterized by the introduction of two concepts: “the New Metropolitanism” and “the New Urbanism.” A recent essay refers to the new metropolitanism as a “paradigm shift.”¹ Although the term takes on many different meanings, its principal components are “urban sprawl” as the problem and “smart growth” as the solution. Moreover, there are many variations on the definitions of the two components in the scholarly literature, in the increasing outpouring of government studies, in general-interest articles on the subject, and, as will be seen, in the chapters in this volume. Despite the differences, there is, nonetheless, broad agreement on the major themes, however defined—sprawl and smart growth.

The New Urbanism is largely about urban design. The organization Congress for the New Urbanism, founded by a group of architects and town planners (<http://user.gru.net/domz/charter.htm>), emphasizes the design features of new communities. In their introduction to a forum on the New Urbanism, Sohmer and Lang refer to it as “architecture’s answer to our rediscovered urban heritage. New Urbanism models its developments on an eclectic combination of traditional urban neighborhoods. . . . Neotraditional building styles and mixed-use, mixed-income, and pedestrian-oriented development are New Urbanism’s defining

1. Katz (2002).

characteristics.”² The tie between the two—New Metropolitanism and New Urbanism—may be seen in a description by Burchell and his coauthors of smart growth as “an effort, through the use of public and private subsidies, to create a supportive environment for refocusing a share of regional growth within central cities and inner suburbs. At the same time, a share of growth is taken away from the rural and undeveloped portions of the metropolitan area.”³

The rapidity with which these issues have reached the policy agenda is attested to by the numerous ballot issues related to its themes. The ubiquity of the discussion is also evident in the rapidly growing number of professional books and articles on the subject by economists, urban planners, sociologists, and health professionals (to list only a few), and the numerous popular articles—ranging from the *National Geographic* to the *New York Times Magazine*.⁴ Not all “urbanists” subscribe to either of the new views of urban development, but no discussion of urban policy can ignore them.⁵

Case Studies of Urban Development

The studies in this volume have been designed to improve our understanding of the patterns of metropolitan development over the past few decades. Studying several metropolitan areas intensively—using case studies rather than a broad cross-sectional analysis—permits a deeper understanding of the common factors affecting development, in historical and specific institutional and political contexts. Some of the common factors are federal tax laws that apply to housing and funding for transportation infrastructure. Other important influences may be unique to particular places: historical factors, local culture, state policies, topography. The limitation of case studies, given the unique characteristics of each area, is the difficulty of generalization.

With these advantages and limitations in mind, the study was designed to include both older urban areas, developed before the automobile age, during the years when manufacturing dominated economic activity (including Philadelphia, Pittsburgh, and Chicago) and newer, rapidly growing, automobile-age metropolitan areas (Phoenix and Los

2. Sohmer and Lang (2000, p. 751).

3. Burchell, Lisotkin, and Galley, p. 823.

4. See Myers and Puentes (2001); Brueckner (2001); *National Geographic*, January 7, 2001; and Michael Janofsky, “Phoenix Counts Its Many Challenges,” *New York Times Magazine*, April 11, 2001.

5. See papers by Gordon and Richardson (2000, 1998a, and 1998b) for critiques.

Angeles). The older areas are generally assumed to face formidable challenges; the more recently developed metropolitan areas are viewed as having (limitless) opportunities.

What is surprising in these studies are the specific ways in which the older and more recently developed metropolitan areas, both slow and rapidly growing areas, appear to identify similar problems and propose similar remedies, as well as the ways in which they differ on these issues.⁶

History of the Project

The project that led to this book was begun in the late 1990s and the case studies were completed before the 2000 Census data were available, although all of them incorporated local and other data sources extending well into the 1990s. It is clear from the 2000 Census data and numerous other sources that the patterns identified earlier, the issues raised, and the policy discussion are no less pertinent now than they were then; if anything, the urban policy agenda appears to have become even more focused on these issues.

Various participants in the project were concerned with the role played in urban development patterns—spatial patterns—by public policies, in particular highway versus transit investments, the federal mortgage interest deduction, and intergovernmental aid. The discussion considered the possible distorting effects of those policies and explored proposals for changes in existing policies and new policies at the federal, state, and local levels that might have a more positive influence on development patterns.

The result of numerous discussions and preliminary presentations by the participants was a template for the studies. The broad outline guiding each case study included the following four topics. The full template is in the appendix at the end of this chapter.

- Metropolitan growth and development patterns: activity, land use, and infrastructure
- Government spending and regulatory activity
- Problems and positive implications of development and policy
- Policy recommendations

The case studies vary in the extent to which they incorporate or emphasize all of the elements of the template, and some include other issues as well. This is to be expected from five such diverse metropolitan

6. Different areas, however, may define issues differently.

Table 1-1. Population Growth, 1960–2000

Percent

<i>Metropolitan area</i>	<i>Metropolitan population growth</i>		<i>Central city population growth</i>		<i>Suburban population growth</i>	
	<i>1960–90</i>	<i>1990–2000</i>	<i>1960–90</i>	<i>1990–2000</i>	<i>1960–90</i>	<i>1990–2000</i>
	Chicago	9.8	7.8	–21.6	4.5	66.2
Philadelphia	11.8	3.7	–20.8	–4.3	39.8	7.6
Pittsburgh	–13.1	–2.6	–38.8	–8.5	–4.3	–1.27
Los Angeles	46.8		40.6	5.9	51.1	8.4
Los Angeles–Long Beach		7.4				
Oxnard–Ventura		12.6				
Riverside–San Bernardino		25.7				
Phoenix	219.8	44.8	123.9	33.6	407.6	54.5

Source: Computations by the author from U.S. Censuses of Population, 1960, 1980, 1990, and 2000.

areas and is one of the major virtues of case studies: the ability to see how the characteristics cited earlier, historical circumstances, state and local interactions, and differing natural environments affect what is viewed as a problem and the policy agenda.

The Continuity and Correspondence of Socioeconomic Patterns

Population change and its specific demographic characteristics will have major impacts on the course of metropolitan development. Whether population is gained as a result of natural growth, immigration, migration for economic benefit, or retirement will influence the nature of change and the links between population growth and economic development. Not only are different parts of the country subject to different underlying sources of population growth and decline, they may experience these discontinuously, with periods of rapid or slow growth or decline.

Population Change

Population growth appears to be a major determinant of urban development patterns. The differences among these metropolitan areas and the continuity over time may be seen in table 1-1, where the population growth between 1960 and 1990 is compared with that in the most recent decade for which full census data are available, the 1990s.

As expected, population in the older metropolitan areas has grown very slowly or, in the case of Pittsburgh, declined. However, with the

exception of Pittsburgh their suburbs have grown but their central cities have all lost substantial parts of their population. In contrast, in the Los Angeles and Phoenix metropolitan areas, the rates of metropolitan population growth are far greater, and *both* the cities and their suburbs have grown substantially. The very large percentage growth for Phoenix reflects its very small 1960 population base. The continuity of these patterns is evident in the data for the 1990s. Pittsburgh was still the only declining metropolitan area, Phoenix was still growing most rapidly, and the other metropolitan areas continued to increase in population.

These differences in the growth of the metropolitan area populations mirror the changes experienced by their respective states and by the larger regions of which they are a part. Between 1990 and 2000 the population of the United States increased by 13.2 percent. In twelve states—eight in the West and four in the South—the population increased by more than 20 percent. Of the nineteen states whose populations increased by less than 9 percent, eight were in the Northeast, an additional eight were in the Midwest; only two were in the South, and one was in the West. The growth rates in the five metropolitan areas in this study are consistent with their state rankings. The most rapidly growing of the five metropolitan areas, Phoenix, is in the second fastest growing state, Arizona, with a population increase over the decade of 40 percent.⁷ California ranks eighteenth among the states, with population growth of nearly 14 percent. Illinois and Pennsylvania, with the three older metropolitan areas, ranked thirty-fourth (growth in population 8.6 percent) and forty-eighth (growth of 3.4 percent), respectively.

Employment Growth and Economic Dynamism

The correspondence or correlation of economic changes with these population changes may be seen in the comparison of the population growth rates with job growth figures. The component of the Forbes/Milken index “Best Places to Do Business and Advance a Career,” which ranks 294 metropolitan areas, includes a component that ranks relative job growth in 2000 indexed to 1995 (see table 1-2).

7. A major factor in the growth of Arizona and Phoenix is immigration. The immigrants have been attracted by the growth in the state and they have “helped sustain the state’s buoyant economy.” “From 1990 to 2000, the Hispanic population [of Maricopa County—Phoenix] swelled by 108 percent, a rate fueled by a rising flow of illegal immigration as well as higher-than-average birth rates and migration from other states. . . . Of the four states bordering Mexico, Arizona had the greatest [percentage increase in Hispanic population], 76.7 percent, compared with an increase of 33.4 percent of California” (Janofsky, “Phoenix Counts Its Many Challenges”).

Table 1-2. Job Growth

<i>Metropolitan area</i>	<i>Relative job growth, 2000^a</i>
Los Angeles	184
Orange County	31
Ventura County	72
Riverside–San Bernardino	7
Phoenix–Mesa	4
Chicago	207
Philadelphia	192
Pittsburgh	231

Source: Forbes/Milken Institute, “Best Places to Do Business and Advance a Career” (rankings for 2002 and 2001) (www.forbes.com/bestplaces).

a. Indexed to 1995, rank among 294 metro areas.

As for population, so too for employment growth. Phoenix is the high-growth standout, with the outer counties of the Los Angeles metropolitan area not far behind, and Pittsburgh is generally the low-growth pole (see table 1-3).

The full Forbes/Milken Institute measure of urban vitality for 2002 and 2001 again compares these five metropolitan areas with one another and with the 294 metropolitan areas included in the index. This ranking takes into account wage and salary growth, job growth, and high-tech output growth and once again indicates the relationship of the various measures of urban vitality—population and employment growth and economic development potential.

The Los Angeles and Phoenix metropolitan areas, where population growth has been rapid, are found at the top of the rankings. In Los Angeles, the outer counties account for the high rating, consistent with the population growth figures in table 1-1. Not surprisingly, the older metropolitan areas are further down in the rankings, although they are mid-ranked locations, far from the bottom of the nearly 300 places included.

There is yet another important indicator of major determinants of urban development patterns and of the relationship of the case study metropolitan areas to one another and to the larger universe, the Milken Institute’s “State Science and Technology Index.” In this index, five technology-related factors are included for states: Research & Development Inputs, Risk Capital and Entrepreneurial Infrastructure, Human Capital Investment, Technology and Science Workforce, and Technology Concentration and Dynamism.⁸ In this index, all four of the states in which

8. DeVol and others (2002, Executive Summary, p. 1).

Table 1-3. Forbes/Milken Best Places to Do Business and Advance a Career, 2001 and 2002

<i>Metropolitan area</i>	<i>Forbes/Milken rank, 2002</i>	<i>Forbes/Milken rank, 2001</i>
Los Angeles–L.A. County	100	118
Ventura County	4	18
Orange County	10	12
Riverside County	11	27
Phoenix	17	9
Philadelphia	116	122
Pittsburgh	132	113
Chicago	141	100

Source: www.forbes.com/bestplaces.

the case study metropolitan areas are located rank in the top twenty of the fifty states on a weighted average of these factors: California ranks third, Pennsylvania sixteenth, Arizona eighteenth, and Illinois nineteenth.

Summarizing the Case Studies

Against this background of enormous differences in population and employment growth, the analyses and conclusions of the case studies are remarkably similar.

The Problems

—extensive decentralization, often referred to as urban sprawl, which is associated with increased road congestion (paradoxically associated with excessive suburban road construction), pollution; loss of open space; lack of space for new development;

—spatial inequality—that is, income and racial segregation;

—wide fiscal differences among jurisdictions within the metropolitan area—between central city and suburbs and among older (inner) and newer (outer) suburbs (the exception here appears to be Phoenix);

—a spatial mismatch between the location of growing employment opportunities and the residences of the urban poor.

In several of the studies, these problems are attributed to, or believed to be exacerbated by, public policies that favor suburban locations over central cities. Among the causal public policies are:

—the federal mortgage interest deductions for homeownership;

—federal and state transportation subsidies that favor highway construction over mass transit maintenance and construction;

- federal and state subsidies for new water and sewer systems;
- state policies that cede control over land use to local governments, resulting in large lot zoning and fiscal zoning.

The Policy Recommendations

An important impetus for these studies was the growing evidence that urban development patterns were influenced in important ways—many of them negatively—by public policies. The studies identify the ways in which policies have had distorting effects and recommend numerous policies for remedy; policies that would remove the distortions, as well as others that would be more likely to bring about desired changes in the patterns of urban development. These include:

- correcting the “distorting” public policies;
- greater regional policy coordination;⁹
- coordinated land-use policy and a variety of measures to control growth;
- regional sharing of the fiscal base; greater fiscal equalization by state governments.

Comparisons

Although there is remarkable similarity among the case studies’ identification of problems and policies, often the definitions of problems and specific policies are somewhat different. In most cases the differences may be attributed to local circumstances. For example, the case studies use somewhat different definitions of urban decentralization or sprawl, and these differences affect their analysis of the problem, its causes, and potential policy interventions.

The Philadelphia analysis emphasizes the influence of public policies on excessive land use: “Not only do intergovernmental aid flows not function to level the fiscal playing field between fiscal capacities and public service needs—but public capital spending and federal tax policy related to owner-occupied housing also tend to favor the better-off suburban areas. Consequently, the location decisions of some firms and

9. Current data are available for four of the five case study metropolitan areas: Chicago leads the four with 567 local governments, followed by Philadelphia with 442, Pittsburgh with 418, and Phoenix with only 34. However, the decentralization takes on a different meaning when local governments are related to population—that is, local governments per 100,000 residents. For the latter, Pittsburgh stands out with 17.7, with Philadelphia and Chicago well behind with only 7.4 and 6.6, respectively, and Phoenix even less decentralized with only 1.2 local governments per 100,000 residents. See Puentes and Orfield (2002, p. 13).

middle-class (and above) households are distorted, leading to unbalanced and inefficiently allocated growth and development throughout the region.”

The authors of the Chicago study refer often to Chicago as a sprawled region, and the definition of sprawl appears to be an increase in developed land area that exceeds the growth of population: “Between 1970 and 1990, the population of the metropolitan area increased by only 4 percent, but the urbanized or developed land area increased by more than 47 percent. In other words, in only a twenty-year period, roughly the same number of people came to be spread out over almost half again as much land.”

In Los Angeles and Phoenix, where metropolitan areas have been experiencing rapid population growth and an expanding economy, we find yet another definition of sprawl. In the Los Angeles study, the authors consider sprawl a major problem despite the fact that population growth exceeded the growth in developed land (contrast Chicago): “Between 1982 and 1992, regional population grew by almost 25 percent, while urbanized land increased only about 20 percent. . . . [Thus] despite relatively high densities, the sheer size of the region and its rapid population growth meant that more than 400,000 acres of land were urbanized between 1982 and 1997, leading to a shortage of developable land in the region. Significant portions of undeveloped land are either too steep or ecologically sensitive, or are farmlands, state and national forests, or lands protected by conservation efforts through the Endangered Species Act.” Here the problem appears to be rapid development of land due to growth, resulting in a shortage of developable land, not low density or population growth outstripping growth in undeveloped land, or lack of open space.

The situation in Phoenix with respect to sprawl is similar to that in Los Angeles. Population is growing and density is increasing, but population growth is so great that even at increased densities: “Between 1993 and 1998, the urban edge advanced nearly one-half mile per year. In the southeast, the fringe pushed out an average of three-fourths of a mile each year. . . . Calculations from aerial photographs show that between 1975 and 1995 some 40 percent of all agricultural land and 32 percent of all undeveloped desert land was lost to urbanization.” Thus, here too the concern stems from growth and the additional development of formerly undeveloped land, albeit at high densities, and this is defined as sprawl.

Pittsburgh provides yet another contrast: “Policy choices regarding new development in the Pittsburgh region are not rooted in the context

of growth-induced sprawl creating a multi-centered dispersed metro region, but rather sprawl in the context of minimal or negative growth pressure. Growth in Pittsburgh after World War II did not transform the prewar pattern of development until the 1990s. Instead, growth was accommodated within an earlier decentralized pinwheel pattern, one that was established to accommodate the economic and social needs of heavy manufacturing between 1880 and 1920.” As will be clear in the Pittsburgh chapter, the implicit definition of sprawl there is recent growth outside of traditional areas.

In sum, our case studies offer four different definitions of sprawl: (1) inequitable and inefficient policy-distorted location by households and firms, favoring suburbs over central city (Philadelphia); (2) greater percentage increases in developed land than in population (Chicago); (3) development outside of traditional areas (Pittsburgh); and (4) large increases in developed land to accommodate rapidly growing population (Los Angeles and Phoenix).

There are also important differences in the extent of the problems and emphasis on particular policies in the five case studies. There is no bright line between these distinctions. Although they are useful ways of characterizing the emphases in the studies, the distinctions are not black and white; there is overlap but there are substantial gray areas. Thus this summary is an attempt to highlight the relative emphases. The differences can be characterized as follows:

—Saving/revitalizing central cities: This appears to be the major reason for concern with sprawl or decentralization in Philadelphia and Chicago. Given the relatively low rates of metropolitan population growth, growth per se cannot be an important cause of sprawl. The Chicago study emphasizes the much larger percentage increase in developed land than in population. This may be due to the increased demand for land per household, as incomes increase, or per firm, as technology changes and more land is needed for parking in suburban shopping and commercial centers, which have largely replaced or absorbed the growth that might have been expected to occur in the walking downtown shopping and commercial areas of central cities and older suburbs. Although Pittsburgh too has been concerned with preserving the core of the region, its major preoccupation is with overall metropolitan decline.

—Accommodating future growth and protecting open space: These appear to be the major concerns in Los Angeles and Phoenix, not surprisingly, given their past and anticipated growth in population and economic activity.

Table 1-4. Poverty Rates in Cities, Suburbs, and Metropolitan Areas, 1990 and 2000

<i>Metro area</i>	<i>1990</i>			<i>2000</i>		
	<i>City</i>	<i>Suburbs</i>	<i>Metro area</i>	<i>City</i>	<i>Suburbs</i>	<i>Metro area</i>
Chicago	21.6	5.1	11.3	19.6	5.5	11.7
Philadelphia	20.3	5.7	10.4	22.9	6.1	11.2
Pittsburgh	21.4	10.5	12.1	20.3	9.3	11.1
Los Angeles	18.9	12.6	15.1	22.1	15.2	17.9
Phoenix	14.2	11.9	12.9	15.8	8.7	11.7

Source: Computations by the author from U.S. Censuses of Population, 1990 and 2000.

— More equitable development: Not only are these studies and much of the literature on urban development concerned with achieving more efficient development, an equal concern is more equitable development, given the substantial income disparities between central cities and suburbs (see table 1-4).¹⁰

There are several notable contrasts to be seen in these data, both across metropolitan areas and over the decade of the 1990s. Phoenix had a relatively minor difference in the spatial incidence of poverty in 1990; however, it was the only one of the five metropolitan areas in which the difference in poverty rates between city and suburbs widened substantially over the decade. At least in this dimension, in the 1990s the fear of the authors of the Phoenix case study that Phoenix might begin to experience problems similar to older metro areas was being realized.¹¹ There is no simple discernible pattern in comparisons of the metropolitan areas over time. Some metropolitan areas had an increase in poverty rates; others did not, and the difference is not between older and newer metropolitan areas. In Pittsburgh and Phoenix the overall poverty rate declined somewhat, but in the other metropolitan areas it increased. In Chicago and Pittsburgh the city poverty rate fell, but in the others it rose. Poverty rates also rose in the suburbs of Chicago and Philadelphia (slightly) and Los Angeles, but fell in Pittsburgh and Phoenix. The most straightforward conclusion is that there is a persistent and substantial difference between city and suburban poverty rates:

—The concentration of the poor in central cities, the problems of the

10. These figures do not take into account the substantial differences among older and newer suburbs, which would make interjurisdictional income and tax-base disparities even more substantial.

11. The city of Phoenix is much more like a metropolitan area. As a result of extensive annexation, much of the city consists of what in most other areas would be suburbs.

poor, and the further problems engendered by their concentration are major concerns in Philadelphia and Chicago.

—But the Los Angeles study has the most detailed set of policy recommendations for dealing with the problems of the poor. The concern in Los Angeles appears to have less to do with the relationship between the poor and urban development patterns than with an intrinsic interest in reducing poverty and relieving the problems of a poor population.

—In Phoenix there are fewer major economic differences between city and suburbs, although there are differences in the socioeconomic characteristics of large swaths of neighborhoods.

—In Pittsburgh socioeconomic disparities are seen as reflecting a need to strengthen the links between places of employment and residence.

Most major local public services are financed by local governments. Achieving greater tax base equalization—more precisely, greater parity between public revenues and public needs—is a major issue since it is widely held that that many or most local public expenditures, including education, public safety, and sanitation, should not be a function of income. However, many studies, including those here, find that federal and state aid do not offset the differences between the tax base and necessary expenditures among jurisdictions.

These contrasts illustrate the ways in which problems are viewed. On the policy side, there are also some major differences in emphasis. These differences have less to do with the contrasting identification of problems than with basic approaches to policy interventions.

—In Philadelphia, the principal approach to policy is to correct the inefficiencies of existing policies that distort location decisions.

—In Los Angeles, policy proposals seek to prevent inefficient location decisions but also enumerate a broad range of additional policies that are cited as responsible for the problems.

—Chicago's policy agenda contains elements of both the narrower Philadelphia approach and the broad Los Angeles agenda.

—Phoenix is more tentative about policy proposals since it is trying to anticipate and therefore avoid problems that do not yet demand solution—although it is concerned about the loss of open space to development in recent years.

—In Pittsburgh the policy discussion is focused on how to make the entire metropolitan area more attractive for new development, with a major emphasis on regional coordination. Here too, the aim is to promote development where it already exists, both in and outside of the city.

The Metro Case Studies: Problems, Causes, and Policy

With these contrasts in mind, the following is a broad summary of the studies in which the discussion of problems, causes, and policy proposals are woven together to facilitate comparisons among them.

Philadelphia

In Philadelphia, the major concern appears to be the economic inefficiency associated with excessive decentralization of the metropolitan area, in particular the negative implications for the central city. The authors attribute this excessive decentralization to location-distorting federal public policies—in particular, federal policies that subsidize suburban locations, a major example being the mortgage tax deduction on federal income taxes. They find that the benefits of the mortgage tax deduction go largely to the suburban communities: the benefits to the entire Philadelphia Primary Metropolitan Statistical Area (PMSA) were \$2.7 billion in 1989, with 84 percent, about \$2.3 billion, going to suburban homeowners.

The problems associated with this excessive decentralization include substantial differences between economic and social conditions in the city of Philadelphia and its suburbs. The concentration of poverty in the city results in lower fiscal capacity and higher tax burdens borne by city residents and firms. This makes the city less attractive and the suburbs a more attractive location for both residents and firms. The relocation of firms and households reinforces the initial impetus for movement, causing additional firms and residents to leave the city and still greater concentrations of poverty in the city, which in turn provides additional incentive for the exodus of city residents and firms.

Moreover, intergovernmental aid flows do not level the fiscal playing field across localities; to level the disparities between fiscal capacities and public service needs would further distort the location decisions of some firms and households, “leading to unbalanced and inefficiently allocated growth and development throughout the region.” Among these unequal flows is assistance for capital spending that can and does affect local economic activity. The authors “believe that the playing field is tilted in favor of the suburbs in the Philadelphia metropolitan area, with population and employment growth higher in suburban areas because of spatially biased roadway investments in particular.”

Chicago

The Chicago case study too emphasizes the substantial spatial decentralization of the metropolitan area and the problems associated with the metropolitan area's fragmentation into many separate jurisdictions. As in Philadelphia, the many jurisdictions in the Chicago metropolitan area have disparate tax bases. Moreover, between 1980 and 1993 the inequalities in local governments' fiscal capacities widened substantially. As in Philadelphia, in Chicago too the decline of the central city and expansion of the suburbs is associated with large socioeconomic disparities between the two: a concentration of racial minority groups, lower incomes, and greater poverty rates characterize the city. Unemployment rates of Chicago residents are substantially higher than in the suburbs. The Chicago study also emphasizes the loss of open space as a result of development in the suburbs and on the periphery of the metropolitan area.

Persky, Kurban, and Lester estimate the per capita distribution of federal funds in the Chicago metropolitan area. They find that the income tax subsidy for housing (the mortgage interest deduction) is the largest of the spatially related categories of federal expenditures by far.¹² Consistent with the Philadelphia findings, they find that this tax subsidy overwhelmingly favors suburbs over the central city, with the city of Chicago receiving about \$125 per capita and the suburbs more than \$500 per capita in both periods, 1989–92 and 1993–96.¹³ Thus the conclusion is that the subsidy has both a purely spatial impact and an unequal equity impact, with the subsidy going to more higher-income suburban residents than to lower-income, non-homeowning, non-deduction-itemizing poorer households concentrated in the central city.

In Chicago, it is noted that “the city . . . would not have developed into the metropolis that it is today had it not been for large amounts of federal, state, and private money spent building up the city's infrastructure (in addition to the significant funds invested by the city itself). . . .

12. Persky, Kurban, and Lester (2000). The other spatially related categories of federal aid are funding for highways and related items, public transit, other infrastructure, environment, and disaster and crime. They also calculate the spatial distribution of other federal expenditures, the largest of which are nonspatial redistribution programs and retirement benefits; the latter are found to flow disproportionately to cities and older suburbs.

13. Here too the authors recognize the importance of assumptions about the elasticity of supply of land; they too assume that in the suburbs land is abundant and that the subsidies reduce the real costs of land, whereas in the city, where land is largely developed, subsidies will be capitalized in housing prices and benefits will be modest at best.

[In the postwar period] the expressway system in particular laid the grid for suburban expansion.”

Given the emphasis on problems associated with regional government decentralization, it is not surprising that greater regional coordination in order to bring about changes in the trajectory of urban development is a major priority. The Chicago authors believe that Illinois can learn from the state of Maryland, where the state provides incentives for municipalities to “grow smart” but does not restrict land use by local governments. As long as they do not use state funds, they may choose where in the county to spend their development money. Although Illinois counties do not have as much control over land-use issues as those in Maryland, Illinois could institute a program “that would require municipalities and counties to make development plans, and then channeled state infrastructure funding only to designated growth areas seems likely to reduce land consumption.”

Los Angeles

The Los Angeles metropolitan area experienced rapid population growth, with most of the fastest-growing cities on the region’s fringe. Despite the rapid expansion of the economy and a concentration of this expansion in the suburbs, Los Angeles County, unlike the older metropolitan areas, still contains the majority of the region’s jobs. Nonetheless, the Los Angeles–Long Beach Primary Metropolitan Statistical Area had one of the nation’s most decentralized employment patterns by the late 1990s. This seeming contradiction is related to the jurisdictional boundaries, namely the fact that Los Angeles County is large. Although only 7 percent of all jobs in the metro area are within a three-mile radius of the downtown, the city (Los Angeles County) still contains a majority of the jobs in the metropolitan area.

Like the older metropolitan areas, Chicago and Philadelphia, the Los Angeles area is also characterized by high concentrations of poverty, substantial spatial mismatch between the location of employment and the location of job seekers, particularly for low-income central city residents, and growing income inequality. A major associated result is a severe housing affordability problem.

Contrary to its image as a sprawling metropolis, population densities are high. This is due to the fact that much of the land is physically undevelopable, because of the presence of desert and mountains, so the populated parts of the outlying counties are quite dense. Again, contrary to popular impression, and in contrast to both the older Philadelphia and

Chicago metropolitan areas, in southern California the percentage growth in population exceeded that in urbanized land areas. Despite the high density and the fact that much open space is not suitable for development, rapid population growth in the region resulted in more than 400,000 acres of land becoming urbanized between 1982 and 1997. Thus the need to accommodate growth, not the decline of the central city, appears to be the major reason for the concern about urban decentralization in Los Angeles.

The investment in highways also looms large in the explanation of urban decentralization. However, some large investments in transit have not succeeded in slowing automobile use: Between 1982 and 1999 VMT (vehicle miles traveled) increased by more than twice the increase in population; hours of delay increased substantially. Both of these were accompanied by associated negative externalities—increased air pollution and wasted fuel. According to the authors, “At the same time, total public transit trips declined . . . during the 1990s. And the *share* of transit users fell . . . despite heavy investment in transit in L.A. County. By century’s end, 93 percent of all regional commuters were still using cars.” The study attributes the continued dominance of the car in L.A. to the city’s radial design focused on the downtown core; a design that “[cannot] adequately serve a polycentric metropolis burdened by severe jobs/housing imbalances; many bus systems are overcrowded, outdated, and perceived as unsafe; and segregation of land uses in relatively low-density suburbs makes driving unavoidable.” The downtown-oriented design might have been intended to strengthen the downtown core by making location along the transit way more attractive. A polycentric design might have induced more people to ride public transit but might also have facilitated development outside the core—further suburbanization and sprawl—by improving travel from one suburb to another. It may be difficult to achieve two goals—reducing automobile use and stemming suburban sprawl—with one policy instrument, public transit.

With respect to stemming suburban sprawl the authors note that in Los Angeles “differences between southern California and other metro areas . . . mean that current nationwide calls for ‘smart growth’ policies may need some alteration to effectively moderate inequities, slow sprawl, and promote more livable communities in the southern California region.” They call for a new framework and specific policy approaches, including equitable housing and transportation goals that will accommodate the region’s future geographic scale: “The region must begin tracking land supply, setting large-scale goals, integrating

land-use and transportation planning, and linking natural resources and protection efforts.” Southern California might also emulate Maryland’s policy of “earmarking state funds to encourage smart-growth planning and development, to provide incentives for urban land recycling and infill development, and to create high-density, transportation-oriented developments. . . . [And] organizations representing low- and moderate-income people . . . must be included in the planning process.”

Phoenix

Development in Phoenix is more like that in Los Angeles than in the older metropolitan areas—in both expected and unexpected dimensions. Contrary to general perception, but like Los Angeles, density is increasing. Also like Los Angeles, but unlike central cities in the older metropolitan areas, employment remains concentrated in the metropolitan Phoenix core, and both population and employment rose in the heart of the metropolitan area in the 1990s, although the rate of expansion was slower than in other parts of the region. Despite the increasing density and relative concentration in the core, Phoenix, like the other metropolitan areas, is increasingly concerned about the decentralization of the metropolitan area. But as in Los Angeles, the increased use of land is attributable to a growing population and economy.¹⁴

A major difference, however, between the Phoenix metropolitan area and the others is the absence of glaring disparities in housing values, jobs, and retail activity between the city of Phoenix and the next largest cities in the metropolitan area. However, like other regions, there are other regional disparities—racial, economic, and neighborhood. The areas north and northeast of downtown Phoenix, including Scottsdale, are affluent. In contrast, poor whites and low-income minorities are concentrated in the central and southern portions of the city.

The Phoenix metropolitan area is also far less fragmented than the other metropolitan areas: there are only twenty-four cities and towns in the Phoenix region. Eighty-two percent of the region’s population lives in either the city of Phoenix or one of its five large suburbs. In contrast, each of the other metropolitan regions includes several hundred separate jurisdictions. Thus fiscal disparities are far less of a problem, and less

14. Although rapid growth means much of the population is new to the area, a recent survey indicated that 80 percent of residents were “concerned” or “very concerned” about the region’s growth, with nearly half of the respondents indicating that they would leave Phoenix tomorrow if they could.

likely to be a motivating force for firms and households to leave the central city.

The picture with respect to highway investment has been quite different from that in the other metropolitan areas. In Phoenix, it is argued, too little investment in highways has caused problems without deterring decentralization: "In early 2000 it completed a freeway system that was begun in 1957 but expanded little between 1970 and 1985, and over the next twelve years limited-access lane miles tripled from 290 to 870. [Nonetheless] metropolitan Phoenix makes do with a less-extensive limited-access road network than most regions its size. . . . As a result, while traffic is increasing, its negative impacts have not yet become unmanageable. . . . [and there is] less congestion in the city of Phoenix than in comparable cities. Daily vehicle miles traveled per capita increased in the early 1990s, but have remained on par with the rate of population growth."

As elsewhere, another concern is that a small public transit system limits the access of lower-income citizens to employment and other activities. Voters in Mesa, Tempe, and Phoenix, however, have recently approved tax assessments to pay for more bus service and the start of a light-rail project in the central employment areas.

Pittsburgh

Despite being bracketed with Philadelphia and Chicago as one of the older, pre-auto-age, manufacturing-based metropolitan areas, Pittsburgh's development has been different. The metropolitan area as a whole is losing population and economic activity rather than simply experiencing slow growth. Between 1970 and 1996 the Pittsburgh metropolitan area—a region of concentrated heavy industry—lost nearly 57 percent of its manufacturing jobs. In addition, Pittsburgh had one of the slowest-growing service sectors. These two factors resulted in employment growth of less than 16 percent between 1970 and 1996. This may be compared with the U.S. national average growth in employment of 64 percent.

After failing to revive the downtown, the Allegheny County government turned its attention to the undeveloped suburban corridor. Airport capacity was expanded and more than 16 million square feet of new office space was added in the 1980s in the downtown and along the airport corridor. Between 1990 and 1996, however, new office space construction was only about one-fourth the rate in the previous decade, and vacancy rates rose as corporate downsizing continued. Also unsuccessful were the efforts to establish a suburban job corridor near the airport. As

table 1-1 shows, the Pittsburgh region is one of only a handful of metropolitan areas that is experiencing overall population loss, and its rate of job growth is only about one-third of the national average. Thus the challenges facing the Pittsburgh metropolitan area are population loss, sluggish job growth, and fragile tax bases.

In Pittsburgh, local transportation and downtown-oriented planning were widely supported. However, “federal legislation has broadened the input of interests from outside Allegheny County, thereby stimulating more interest in decentralized transportation infrastructure. The voting structure of the Metropolitan Planning Organization (MPO), which also serves the Economic Development District, ensures that each county receives equal votes regardless of population. Outlying counties are eager to appropriate ‘their share’ of federal funding, but in a no-growth environment, that occurs at a cost to the region’s core.” Thus in Pittsburgh, federal highway investment is viewed as a threat to the region’s still centralized form.

The emphasis in the Pittsburgh metropolitan area study is on stanching the loss of population and employment sources. The policies emphasize the need for greater regional coordination and growth management. The study’s authors say, “Without a unifying regional strategy, the pin-wheel development pattern will continue to dissolve as growth spills over the fringes. The urban core already faces the prospect of bankruptcy.” With respect to growth management, they say that office construction in the airport corridor also threatens the downtown: “The old [development] coalition itself needs to resolve the contradictions between the goal of airport corridor growth and the goal of reinforcing downtown. . . . Retail and office development has competed for a shrinking pool of consumers and workers. . . . Development that grows the market, rather than shifting it, should receive priority.”

The Proposals: Simultaneity, Costs and Benefits, the Politics of Policy Enactment

Most of the case studies recommend the enactment of several policies simultaneously—for example, greater regional coordination of land-use and fiscal policy, elimination or modification of distorting federal policies like the mortgage tax deductions, and greater funding for transit compared with highways. A major difficulty in considering such changes is that their joint impacts are largely unknown. The political process usually enacts and implements policy without much thought to

coordination with other policies. This may be due to divided responsibilities among public agencies and independent jurisdictions, or the result of federal and state programs being available at particular times. It is not surprising that the academic literature reflects this piecemeal process in its policy evaluations. Studies of transit systems and of highways abound; proposals and evaluations of fiscal integration are numerous. What is missing is a simulation model that can analyze the enactment of several policy interventions simultaneously. For example, what could be expected if prices were corrected to account for negative (or positive externalities) associated with automobile travel, at the same time that regional land-use planning and perhaps fiscal integration were adopted? Such a literature is nonexistent.

Given the emphasis in these studies on excessive decentralization and sprawl and the explicit and implicit policy recommendations to control further decentralization and sprawl in favor of more compact development, it would be important to carefully compare the costs and benefits of maintaining current land-use developments with those of more compact development. Indeed, a prior step would be to develop a simulation model to predict the outcomes of the recommended policies. In particular, would they result in welfare-improving, more compact development? Given the vast changes that have occurred in a great many factors associated with density, it is not surprising to see far lower-density development in the second half of the twentieth century than in earlier decades. The issue raised here and in much of the literature is whether this development has been efficient and equitable, whether, despite the obvious factors resulting in demands for more extensive land development, the extent of land development has been excessive, and in particular, whether the forces behind these increased demands have been exaggerated by government policies.

Income increases, population growth, technological changes such as the widespread increase in reliance on automobiles for personal transportation and trucking for the shipment of goods, the development of air conditioning and airplanes, changes in industrial processes, the decline of manufacturing and increase in the service sectors—all directly or indirectly result in a demand for less-dense land development, the growth of suburbs and airport corridors, and the relocation of population from the Northeast and Midwest to the South and West. Facilitating this increased demand for land is the enormous increase in agricultural productivity, making much urban fringe land more valuable for residential, industrial, or office uses than for agriculture.

Demographic changes—the increased total population, relocation, and thus rapid growth in many parts of the South and West and in suburbs rather than central cities—required additional space, or substantial increases in density, for housing and relocating economic activities. On this count alone, a careful enumeration of the benefits to the persons and firms choosing these locations and the costs to them and others would be appropriate. The decrease in densities was for a long time considered beneficial. The literature on optimum-sized cities was concerned with excessive city density, traffic congestion, and air pollution (which still characterizes major cities). The suburbs offered less congestion, open space, and greater ability to become a homeowner. Higher incomes reinforced and increased the demand for homeownership and larger homes on larger lots.

The process may, however, have been excessive as a result of the many policy distortions and the inattention to negative externalities that accompanied the post–World War II decentralization. Fragmented metropolitan areas do provide the possibility for improved welfare when multiple jurisdictions supply public goods appropriate for households and firms with different tastes. However, as these studies emphasize, such differences also reinforce interjurisdictional inequalities.

In sum, in evaluating whether something is a problem and in assessing the likelihood that the problem can be ameliorated by particular public policy interventions—either new or modified policies—both costs and benefits must be considered. Assessing both the problems and the proposed solutions cited in these five case studies and the broader literature requires careful cost-benefit analysis, taking into account both tangible and intangible benefits and costs, and considering all who bear costs and realize benefits.

It seems clear that major changes in the use and development of land through greater emphasis on transit relative to roads will take several decades. As the case studies emphasize in their policy recommendations, substantial change would require major *coordinated* changes in public policy. Infrastructure and land use in place could be modified only slowly, and incentives for behavioral change would have to be substantial. The ultimate question is whether such changes would be welfare-improving: would the policy changes increase efficiency and equity? That is, would benefits outweigh costs, or would their costs, both direct and indirect, outweigh their benefits?

A final, nontrivial issue is whether and where such proposals are likely to be politically acceptable. There are many examples of different

outcomes, places where anti-sprawl, growth-control measures have been adopted and places where they have been opposed, or adopted and subverted. Regional political coalitions are not based on *net* costs and benefits but rather on who benefits and who bears the costs and how political influence is associated with winners and losers. It is easy to find examples of all of these combinations.

Conclusion

The analyses in these studies, the problems they identify, the causes to which the problems are attributed, and the proposed policy interventions to remedy the problems directly or reduce or remove their causes are representative, in a broad sense, of the current urban policy discussion in the nation. These issues will undoubtedly be the backbone of the urban development and policy discussion in the early twenty-first century. The problems have been building at least since the post–World War II period; the distorting public policies, or lack of appropriate public policies, have been part of the story for at least as long.

The demographics of baby-boom population growth, a major factor in post–World War II suburbanization, has now and for the future resulted in the aging of the population. There are indications that this favors more dense, less automobile-dependent development. The arrival of a younger population of immigrants and their rapid rate of suburbanization works in the opposite direction. A major unknown for the future is the nature and impact of technological change. The automobile, the increased use of trucking for goods transport, and the changes from vertical to horizontal manufacturing processes all reinforced decentralization over the past few decades. Many believe that recent technological changes have facilitated further decentralization (such as communications developments that reduce the need for face-to-face contact and allow individuals to work together at long distances). However, other factors may increase concentration. Perhaps most important are the changes in the employment base of the United States toward even more intensive concentration in the service sector. This may increase the importance of agglomeration—despite the communications developments and outsourcing—and thus result in more concentrated employment locations, albeit not necessarily in the established metropolitan centers.

However these factors interact, the policies proposed in these studies and their ability to turn urban development away from its current tra-

jectory will require the policy community to enact major policy changes *simultaneously*, rather than piecemeal. A major emphasis in these studies is the need for *coordinated* policy changes. A final set of issues, requiring further analysis with simulation models that are capable of considering simultaneous changes, concerns whether the public—households and firms—will respond to the incentives of such policy changes in the anticipated directions.¹⁵

Appendix. Chapter Outline for the Case Studies

Section 1: Metropolitan Growth and Development Patterns: Activity, Land Use, and Infrastructure

- a. What did the spatial distribution of activity (employment/firms, population/housing units, vacant land) look like in the base period—for example, 1960?
- b. What did the spatial distribution of infrastructure (roads, public transit, airports, water and sewer systems) look like in the base period?
- c. How did each of these change through 199x?
- d. What special factors in the history, political economy, topography . . . of the region influenced the development and policy described in a, b, and c?
- e. What problems (efficiency—environmental deterioration, increased congestion, segregation, land consumption—or equity) arise from these spatial patterns? Why/how do these regulatory policies affect the spatial distribution of activity? Do they cause (reinforce) problems, solve (assist in the solution of) problems?
- f. What are the positive implications (efficiency—increased consumer satisfaction, productivity improvement, decreased congestion, improved environmental quality, Tiebout type increased public goods choices—and equity) of these spatial patterns?

Section 2: Government Spending and Regulatory Activity

- a. What are the major flows of federal funds to the area? To which places, for what functions?
- b. State flows of funds? For what functions?
- c. Local spending patterns and revenue sources; tax burdens.

15. Brueckner (2001) has used such a model to investigate the implications of policies to control urban sprawl.

d. Describe federal, state, and local regulatory and administrative policies with implications for spatial distribution of activity.

Section 3: Problems and Positive Implications of Development and Policy

a. Can the problems identified in Section 1 be attributed to/are they caused by or reinforced by the patterns/timing of infrastructure investment? Alternatively, is the infrastructure investment a response to the problems? (Is inference based upon historical patterns or analytic model? Describe.)

b. Can the positive implications identified in Section 1 be attributed to/are they caused by or reinforced by the patterns/timing of infrastructure investment? Alternatively, is the infrastructure investment a response to the problems? (Is inference based upon historical patterns or analytic model? Describe.)

c. Why/how do the intergovernmental flows of funds, local spending and revenue patterns, or regulatory policies affect the problems or positive implications identified in Section 1? Do they cause (reinforce) problems, solve (assist in the solution of) problems?

Section 4: Policy Recommendations

a. What policy recommendations—for federal, state, and local governments—follow from the identification of problems and positive outcomes and their sources identified in Sections 2 and 3?

b. Do these recommendations deal with efficiency/equity issues?

c. What are the major unknowns with respect to appropriate policy interventions? Problem clear, policy unclear; policy not likely to be politically acceptable; policy difficult to implement?

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