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An Overview of Urban Growth: Problems, Policies, and Evaluation

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The world has been urbanizing rapidly for a long time and shows every sign of continuing to do so: more than 40 percent of the world's population today are urban dwellers. Dramatic urbanization over the past two or three decades has been concentrated in the developing countries, where the urban population has been expanding at twice the rate observed in the countryside. In fact, the world's biggest cities have increasingly been in the developing nations, and population concentrations in such urban centers as Mexico City, São Paulo, and Shanghai have reached extraordinary levels.

The rapid growth of cities and their large sizes notwithstanding, the urban share of total population in the developing countries as a whole is less than one-third, compared with more than three-fourths in industrial market economies. Furthermore, the current pace of urbanization in developing countries is not unprecedented: the urban population in some of today's advanced economies grew even faster in the past. The difference lies in the much larger absolute sizes of a few cities and of urban agglomerations in the developing countries today. The urban populations constitute a relatively low share of the national totals, however, as a result of significant population increases from large bases in the rural areas.

Whether or not the current pattern of urbanization in developing countries is alarming when viewed from a historical, spatial, and cross-country perspective, it greatly concerns most governments in those countries. Consequently, some countries follow policies intended to slow down urban concentration and even reverse rural-to-urban migration. Some measures—such as the creation of new cities and the discouragement or prohibition of further industrial concentration—are intended to decentralize economic activity from large, congested urban agglomerations. The stated objectives include the need to reduce the economic and managerial costs of overcrowding and improve regional and urban-rural income distributions. At the same time, other economic policies—for example, credit subsidies, import protection, and urban food subsidies—more often than not indirectly promote urban concentration. Awareness of such effects has prompted some policymakers to reconsider these implicit spatial policies.

This volume is a response to the increasing preoccupation with urbanization in developing countries and to the associated policy issues. In part, the book is concerned with an understanding of why and how urbanization occurs. An examination of the patterns of urbanization among countries and over time puts in perspective the more recent developing-country experiences and brings out similarities in urbanization in different countries during economic development. Explanations of the processes of urbanization are also essential to better appreciate the benefits and costs connected with those processes. These concerns are linked to another goal of the book, an evaluation of urbanization policies. Policy initiatives that attempt superficially to counter deep-rooted urbanization trends can be costly; policies to address the underlying causes of concern and ameliorate urban (as well as rural) problems directly can be beneficial.

Linn (1983) and Renaud (1981) have made important contributions in this area. Renaud compares macroeconomic, urbanization, and interurban policies in developing countries with those in the developed countries and discusses the need to correct the undesirable spatial effects of national economic policies, make internal management of cities more efficient, and increase economic efficiency by eliminating barriers to mobility of resources and dissemination of innovations. Linn focuses in greater detail on intraurban issues and on how to increase the efficiency and equity of growing cities. He covers a wide range of areas—urban employment, income distribution, transport, housing, and social services—and evaluates the effectiveness of such policy instruments as public investment, pricing, taxation, and regulation.

This study focuses more sharply on the policy issues connected with concentration and decentralization. Evaluation methods and quantitative assessments of policy effects have been drawn from the experiences of different countries. The book complements the more general urban review of Renaud and the city-specific findings of Linn in that it seeks to sharpen the economic analysis and evaluation of urbanization policies at the national and city levels. A unique aspect of this book is its attempt to deepen our understanding of the economic benefits and costs of urbanization and urban policy interventions without denying the contribution of other disciplines to an understanding of urbanization.

Patterns of Urbanization

In comparisons of urbanization it must be kept in mind that countries do not report their urban populations uniformly. The reasons for nonuniformity range from use of different criteria in defining urban areas to differences in concepts and in the accuracy of statistics among countries. Furthermore, global data for the urban sector usually gloss over important intraurban differences among countries, including variations in the definition and nature of large as against small cities. Statistics on urbanization should therefore be used with caution and perhaps only for broad comparisons.

Historical Comparisons

Some argue that developing-country urbanization today is qualitatively different from the historical pattern in today's developed countries. The main difference relates to the absolute levels of urbanization today, which in good measure are based on large overall populations. High levels of absolute poverty are also associated with urbanization. During 1970–82 the developing countries experienced a more rapid urbanization than did the industrial countries (table 1-1). The orders of magnitude are even more striking between 1950 and 1980, when the urban areas of the developing countries (excluding China) absorbed nearly 600 million additional people—twice the total number of urban dwellers in industrial countries at the beginning of that period.[1]

If the recent trends continue, an additional 1 billion urban dwellers may be added in developing countries by the end of this century. The magnitudes are historically unique. Unprecedented concentration of people is likely to prevail in several cities in the developing countries which are already among the biggest urban agglomerations in the world. According to U.N. projections, Mexico City and São Paulo each may contain more than 25 million people by 2000, closely followed by Shanghai, Beijing, and Rio de Janeiro; of the twenty-five cities that are likely to have more than 10 million people, twenty are expected to be in what are now considered developing countries. The magnitude of this growth is likely to compound the problems of managing cities and of addressing absolute poverty and unemployment.

Although the sheer magnitude of urbanization and of associated problems in developing countries is phenomenal, some other salient aspects of the present urbanization pattern do not depart markedly from past experience. A comparison of trends over many years reveals no dramatic changes in the growth rate of the world's urban population. The share of the world's population in urban areas has increased steadily, from an estimated 3 percent in 1800 to more than 40 percent today, but the percentage change per decade in the

Table 1-1. ***Urban Population: Share and Growth, by Country Group***
(percent)

Country group	*Urban population as share of total population*		*Average annual growth in urban population*		*Average annual compound growth in urban share,*
	1960	*1982*	*1960–70*	*1970–82*	*1960–82*
Low-income	17	21	4.1	4.4	1.06
Middle-income	33	46	4.4	4.2	1.67
Industrial market	68	78	1.9	1.3	0.69
Industrial nonmarket	48	62	2.6	1.8	1.29

Source: World Bank (1984), annex table 22, p. 260; the last column is derived from the first four.

proportion that is urban has remained around 16 percent during this period.[2] As seen in table 1-1 the developing countries today are adding to their urban populations more rapidly than are the developed countries, but these rates are not very unlike those observed during earlier periods of urbanization in what are now developed economies. Hence, the long-term processes under way are not totally surprising.

Comparisons among Countries

Behind the total figures on urban population lies a variety of individual country experiences. Latin America is by far the most urbanized among the developing regions; some two-thirds of its population live in urban centers. In contrast, low-income Asia and Africa are predominantly rural, with average urbanization levels of 25 percent. Intraregional differences are also significant: the urban share is about 83 percent in Argentina and 46 percent in Ecuador; it is 24 percent in India and 12 percent in Bangladesh.

Notwithstanding these differences, some comparisons seem to apply broadly across countries. Descriptively, a clear and well-known association is observed between income level and the percentage of population which is urban. As shown in table 1-1, for countries with low incomes, 21 percent of the total population was urban in 1982. In contrast, 46 percent of the population was urban in middle-income countries, and 78 percent was urban for the higher-income industrial market economies. A broad positive association between income levels and degree of urbanization also seems to hold within regions. (There are, of course, many exceptions to the simple relation between income level and the percentage of population that is urban.)

Furthermore, growth in urban population appears to have a tendency to decline with rising incomes. This tendency is reflected in differences in the rate of urban population growth among countries with different incomes. During 1970–82 urban population grew at 4.4 percent annually in the low-income countries and at a much higher rate if China and India are excluded. In the middle-income countries urban population growth was 4.2 percent annually, whereas for the high-income industrial market economies the urban population growth rate was only 1.3 percent a year.

These regularities in urbanization in developing countries might be expected as part of the development process. Some aspects of present-day concentration may nevertheless be considered especially noteworthy. A tendency often noted is that large portions of the populations of rapidly developing countries tend to be concentrated in one or a few cities. For the low-income countries, on average, 16 percent of the population was in the largest city in 1980. In the middle-income countries the proportion was substantially higher, 29 percent. In the industrial market economies, however, it was only somewhat higher than in the low-income countries—18 percent. Because of the high representation of rapidly growing countries in the middle-income group, the figures lend some support to the observation that one way in which rapidly developing countries of today differ from countries that underwent development earlier is in the tendency for their urbanization to be more heavily concentrated in large cities. In fact, the overcrowding in one or a few cities, and the visible poverty connected with this phenomenon, are of prime concern; the overall level and rate of urbanization in the country as a whole are less prominent issues.

Some Generalizations

Some relations between urbanization and economic development can be further distinguished with the help of simple descriptive regressions. For sixty-six low- and middle-income economies for which data are available, regressions have been run using the following independent variables: (1) the per capita income rank of the economy, (2) the percentage rate of growth of per capita income, (3) the percentage rate of growth of total population, and (4) zero-one variables that represent the region in which the economy is located. (For example, for an economy in Asia the Asia variable takes on a value of one and the values of all other regional variables are zero for that economy.)

Degree of Urbanization. When the independent variables listed above are used in a first-regression equation to explain urbanization, as measured by the percentage of the population that was urban in 1980, a high degree of association is found. The multiple regression coefficient, R^2, is 0.769. The most significant variable in explaining the percentage of the population that is urban is the income rank. This finding corroborates the positive relation already noted between income and the degree of urbanization. The growth of total population has a significant negative effect in explaining the percentage of the population that is urban. This result may be attributable to slow population growth in higher-income countries, which, in view of the positive income-urban relation, also tend to be the most highly urbanized. The growth of per capita income has a negative, though less significant, coefficient in explaining the urban share of population. The most rapid percentage gains in per capita income occur in countries other than those which already have high levels of income and urbanization. Thus, countries with the most rapidly rising incomes usually have not yet reached the highest which are discussed in case study detail in later chapters—and points out that urbanization and its accompanying phenomena are products of wider development processes. Care must be taken in the design of measures and policies concerning urbanization to avoid extreme corrective actions that may hamper development.

Urban Poverty

The most widely observed and acutely felt urban problem in developing countries is the large numbers of poor and unemployed people in the cities. The extent of poverty in the economy as a whole depends on the degree of economic development. Urban poverty is viewed as part of overall poverty; the rural poor move to urban areas, which tends to broadly equilibrate real incomes across locations. Poverty is related in great measure to the size of the low-skilled population, which is distributed among urban and rural areas according to economic and other considerations that affect the entire population.

Growth of production leads to growth in demand in urban areas for all factors of production, including unskilled labor. The change in the proportion of unskilled workers in urban areas depends on growth in demand for urban and nonurban commodities, on substitutabilities between unskilled workers and other factors of production, and on the comparative decline of so-called traditional production in urban and in rural areas. Traditional production may be defined as production by firms or households which, although they can modify their output and techniques in response to changes in prices of products and factors, are not viable in the face of competition from modern domestic or foreign manufacturing or from modern farming enterprises. Traditional production usually uses unskilled labor, and its decline may release unskilled labor to other parts of the economy. Although some analysts explain economic development exclusively as a decline in traditional production, development is here viewed as a broader process which involves an accumulation and transfer of knowledge that could and probably would occur even if no units became unviable. The large-scale decline of industries that engage in traditional production may be an important accompaniment of development in some countries—since the decline is accompanied by substitution of capital for labor and by introduction of new techniques—but in other countries this process may be an unimportant detail. Other things being equal, if the decline in traditional production is greater in rural than in urban areas, the proportion of unskilled workers and hence of poor city residents will increase.

Even in the absence of traditional production, development may be concentrated in industries or firms that initially make up a small part of the economy, most often in the urban sector, in early stages of development. The rise in marginal productivity of all labor, including unskilled labor, may be slow at first and then may accelerate as a greater proportion of the economy develops. As the marginal productivity of labor rises in the course of development, the incomes of those at the low end of the income scale also rise. Furthermore, since development increases the returns to education and other forms of human capital investment, many persons who would otherwise be unskilled transform themselves into skilled laborers and thus directly raise their incomes. The number of unskilled employees falls, and their marginal productivity consequently rises.

Urbanization, which accompanies the strengthening of comparative advantages in urban sectors with development, can be associated with considerable visible poverty and other urban problems, particularly as unskilled workers become displaced from traditional rural activities. Sustained and continued development over a long time would be desirable to ameliorate adjustment problems and increasingly absorb the previously unskilled laborers into the developing economy. The origins of urban problems lie in inadequate and unsustained development and rural-urban adjustment, but those are by no means the only sources of difficulties.

Spatial Concentration and Overurbanization

Increasing concentration of economic activities and people has been viewed as a reflection both of development and of economic deterioration. As already noted, whereas the generally higher incomes in urban areas are associated with the benefits of urbanization, urban poverty and unemployment and a host of problems associated with pollution and congestion are the most noted indicators of urban failure. Embedded in the urbanization process are elements that represent development and that deserve to be promoted, but urbanization also brings with it externalities which can bring about overcrowding.

Three types of externalities may be associated with overurbanization. First, environmental externalities, such as those connected with pollution and congestion, can mean that cities' sizes are larger than would maximize national (or regional) income and welfare. Second, protected employment that maintains urban wages above market-clearing levels may make cities larger or smaller than they otherwise would be, depending on the elasticity of demand for labor. Third, the attractiveness of urban areas (because of the availability of free or subsidized public services and the advantages of proximity to government activities) can lead to excessive urbanization. Going beyond these urban externalities, a hypothesis offered here is that the phenomenon of great urban concentration in one or a few cities is connected with the difficulty and relatively high cost of providing intercity transport in developing countries, and that more general infrastructure decisions also play a role.

Urbanization Policy in Market and Mixed Economies

Some of the differences among today's developing countries that merit attention are emphasized by Renaud in chapter 5. In many of today's developing countries additions to population are larger, income levels are lower, and opportunities to relieve population pressures through migration are more limited than in others. Urbanization in today's advanced economies presents a different set of issues. In some countries there is a process of a slowdown and an eventual end to urbanization and the emergence of yet another industrial revolution based on new technologies which are less tied to concentrated manufacturing centers.

Chapter 5 provides a review of urban-related problems in developing countries—regional inequalities, congestion, pollution, and inadequate provision of urban services—and a threefold classification of related urbanization policies: national economic policies, such as import controls, that have spatial effects; explicit regional development policies, such as investments in infrastructure; and policies concerned with the management of cities. Problems and policy emphasis vary among countries: they are influenced by the age-old structure of cities in Asia, the rapid urbanization which has been going on for some time in Latin America, and the new urbanization in several parts of Africa, which started from a low base and is proceeding at unprecedented rates.

National economic policy sometimes produces significant and unintended effects on urbanization which may outweigh any direct and intended effects of urbanization policies. The unintended spatial biases of national economic policies usually favor some urban centers and are commonly generated through trade policies that protect the manufacturing sector. For example, credit allocation, public investment, and pricing policies may give preferential treatment to economic activities that are concentrated in a few cities and regions. The management practices of the central government and its regulation of economic activities, which make location close to the capital necessary or advantageous for firms, also contribute to the urban vortex.

Explicit regional development policies sometimes attempt to favor decentralization, but they are not always successful or efficient. An unintended by-product of regulations in India that favored rural over urban development has been the encouragement of the growth of the urban underground economy. The use of water resources for regional development purposes in Malaysia has been dramatic, and policy attention to leakages and regional multipliers has been greater than usual. The Republic of Korea, because of its shortage of land, has an intense interest in land-use guidelines (see chapters 5 and 8), but in spite of prohibitions and incentives, export-oriented growth policies and industrialization ensured that the largest urban centers, especially Seoul and Pusan, would continue to grow. Venezuela and Brazil have pursued industrial deconcentration policies, with limited success (chapters 9 and 13). In addition to policy incentives or disincentives, the balance of labor market considerations, economies of scale within an industry, and the effect of the total size of a city determine location decisions (chapter 7).

The appropriate internal management of cities is important to the success of national spatial policies. Sub-Saharan Africa exhibits acute problems of city management in the face of rapid urbanization, albeit from modest bases. Centralization of decisionmaking in Nigeria, for example, has made it difficult to deal with local problems. In very large cities, policies to limit or stop population growth are not good substitutes for policies that address the urban bias and that directly seek to correct congestion and pollution and provide adequate services. If other cities are not efficiently and effectively managed, their chances of attracting industries and migrants from the largest urban centers will be small. Regional policies can strengthen promising secondary urban centers through well-chosen, cost-efficient actions, better policies for transport investment and management, industrial estates policies, and more important, the systematic development of organized informational networks, such as banking networks, industrial association networks, and better administrative structures, between the secondary cities and the capital region. Good city management and selected regional investments, combined with national economic policies that do not discriminate against rural areas, would do much to alleviate the problems of urbanization.

Urbanization Policy in a Centralized Economy

Parish (chapter 6) describes how China's socialist leaders, since their coming to power in 1949, have tried to shape the nation's cities to avoid many of the urban problems encountered elsewhere in the developing world. Policymakers planned to restrain the rate of urbanization, since rapid urban growth has often been accompanied by an insufficient number of suitable jobs for new migrants from the countryside. They sought to avoid the pattern found in other countries of rapid growth of a few large coastal cities at the expense of smaller interior cities. In addition, they tried to narrow the significant gaps in living standards between Chinese cities and rural areas by creating secure jobs and guaranteeing such basic services as health, education, housing, and essential food supplies for both urban and rural populations.

China's history since 1949 brings out both the potential and the disadvantages of urban development in a centrally planned economy. With greater control over economic resources than in the average market society, the government was able to shift investment funds to promote the development of medium over large and interior over coastal cities, which helped reduce regional inequalities. Control over jobs and rationed consumer supplies meant that for a time the government was able to limit severely the growth of all cities, and funds that might have been spent on an elaborate urban infrastructure for new migrants were spent instead on rapid industrial growth.

The government has been able to put the urban population to work. Most able-bodied women, and more than half the urban population, are employed. Few of the jobs are part-time or likely to be lost tomorrow; they are primarily full-time jobs that promise to last for a full career. In these ways Chinese cities have avoided some of the severe problems of unemployment and employment instability that have afflicted other developing-country cities.

Policy mistakes have, however, been made and have led to some of the same problems found in other societies. For instance, it was an error to downplay the role of light industry and consumer services. Some developing-country cities may have too many people in informal service activities, but China illustrates the problems of the opposite extreme. The restricted opportunity for growth of light industry and the bureaucratic restraints on small individual enterprises have fed problems of youth unemployment. Although elimination of urban-rural income gaps was an objective, on balance a pro-urban and proindustrial bias might nevertheless have existed, as in many other countries.

The unemployment problem was heightened by the rapid expansion of employment for women. Jobs were created during the 1960s and 1970s, but since those jobs were taken almost as frequently by women as by men, the need to create additional openings was greater than in other developing societies. Furthermore, the rapid expansion of secondary school education, as in many other developing societies, contributed to growing numbers of unemployed educated persons. China avoided this problem at the university level but not at the secondary level. The unemployed youths were particularly frustrated because the same level of education had guaranteed good jobs just a decade before, when education was less common. This frustration—shared with youths in many developing countries but perhaps felt more acutely in China because of the socialist promise of secure jobs and rapid development—contributed to the outbreak of petty crime in the 1970s and continues to fuel the social alienation of some youths.

China's experience with the virtual elimination of small informal service activities illustrates the necessity for these types of activities in developing cities. Some argue that because of high population growth rates and the difficulty of centralized provision of essential urban services, the informal service sector in poor societies is essential and should be embraced rather than shunned. China's leaders seem to be moving closer to that view, which entails a greater reliance on market forces, even though they reject its extreme version. Smaller, more makeshift work arrangements, organized ad hoc by neighborhoods and individuals, with lower rates of pay and security, are now approved as a way of providing both employment and essential urban services. Further efforts to improve the relative position of rural activities are being made, and farmers are beginning to narrow the gap between average rural and urban incomes.

Concentration and Decentralization Policies

At different times and in different countries the growth of large cities has been welcomed and deplored. Governments have used policy instruments to encourage location in major cities or to foster—sometimes even to force—diffusion. Chapters 7, 8, and 9 examine the reasons behind spatial location policies in four countries and the outcomes of those policies.

Encouragement of Concentration: Brazil

The relative emphasis on concentration and on decentralization in Brazil has changed with the varying fortunes of the economy; concern about concentration has often diminished during times of economic difficulty. Neither concentration nor decentralization may be undesirable in itself; government policies, however, may have intended and unintended effects on industrial location which affect economic welfare. In chapter 7 Henderson examines how government policies have influenced concentration in Brazil, and he attempts to evaluate the desirability of such influences when the existence (or absence) of certain types of economies of scale in urbanization and industrialization is taken into account. The data base for the core of the paper relates to 1970, and much of the discussion therefore concerns the historical evolution of policies which essentially promoted concentration. Some aspects of the distinct efforts in the 1970s to achieve decentralization are covered in chapter 13.

Localization economies are found to be strong in Brazil, and therefore agglomeration of firms into specialized cities—to take advantage of such benefits as efficiencies in labor markets and in services specific to an industry and greater specialization among firms within an industry—is advantageous. The present results do not show any significant urbanization economies at the scale of activities prevalent in the urban centers of the South and Southeast of Brazil in 1970. The rationale for efforts to encourage industrialization of the largest urban areas rests on the putative net benefits for heavy industries from locating in areas with a large general scale of economic activity. Henderson's findings do not, however, support this rationale. Rather, they indicate that efforts to limit or counter decentralization initiatives may not be desirable.

In addition, negative externalities in the form of environmental degradation could constitute grounds for actually promoting some degree of decentralization. But the size distribution of Brazilian cities is by no means excessively skewed, and efforts to bring about decentralization or a different distribution of city sizes for its own sake may not be warranted. Nevertheless, the provision of more uniform incentives to middle-size cities—which could simply mean the elimination of any special incentives, direct or indirect, for larger cities in the southern region—coupled with environmental restrictions in the highly damaged and built-up areas, could lead to an economically beneficial decentralization of activities.

Industrial Mobility and Decentralization: Colombia and Korea

Lee (chapter 8) documents the changing patterns of employment location in Bogotá and Cali, the first and third largest cities in Colombia, and summarizes some econometric work on location choices by manufacturing firms. The study also outlines a framework for measuring policy effects and draws policy conclusions, particularly in the context of Korean experience with spatial policy.

The main phenomenon observed is the policymakers' frequent attempts to relocate industries from the traditional industrial districts of large cities to outer areas or to smaller cities. The government's plans may include developing new industrial towns or estates or expanding existing ones to induce new firms or firms that are moving to settle in a desired area. In all cases implementation of such plans and programs requires the selection of particular types of industries to occupy sites with particular attributes. Hence it is important for policymakers to understand the requirements of firms for attaining equilibrium at new locations and to be able to assess the level and costs of government subsidies and infrastructure investment needed to meet such requirements.

The Bogotá study did not test the effectiveness of explicit policy instruments, partly because such instruments were not implemented in that city. Nevertheless, the behavioral underpinnings established in the study provide clues as to which policy instruments are most appropriate for influencing both the location choices of particular types of firms and the aggregate locational patterns. It is apparent that government policies intended to influence employment locational patterns can be effective if they influence the site attributes which are important to firms.

Lee also examines urban policy in Korea. During the past decade various spatial policies to control the growth of Seoul and to disperse its population have been implemented. For example, in 1971 the greenbelt surrounding Seoul was established. Subsequently the 1977 Industrial Location Act in effect prevented new manufacturing firms from locating within Seoul and enabled the government to issue relocation orders to establishments already set up there. In 1977 the government initiated a ten-year comprehensive plan for redistributing population and industry away from Seoul.

Several other developing countries have tried to decentralize economic activity away from the central city. The economic desirability of decentralization policies has not been established, and not much is known of their effects or their welfare implications. The key policy question is how to guard against spatial policies that are excessive in relation to prevalent decentralization trends, since such measures might result in serious welfare losses. In developing countries the lack of empirical information on decentralization and policy effects does not yet permit the formulation of more efficient spatial policies, but policies to decentralize population and economic activity are probably not good substitutes for better internal management of city growth. For example, the effect on air pollution or on traffic congestion of reducing the population or employment in a large city by a certain amount is likely to be small.

A Decentralization Program: Venezuela

Reif (chapter 9) uses the case of Venezuela to provide a full-fledged evaluation of decentralization policy. The goals of Venezuelan policy have been to prohibit the location of new manufacturing in Caracas and its surroundings, to induce hazardous industries to relocate and to encourage others to move to designated development areas, and to attract new manufacturing plants to the designated areas. Policy instruments include direct financial and fiscal incentives, indirect benefits, and negative incentives such as locational control. Reif finds that although little overall deconcentration took place from 1971 to 1978, new firms did tend to leave the country's dominant industrial area.

It remains to be established, however, that the deconcentration was the result of government policy. An analysis of the effects of financial, fiscal, and negative incentives indicates that these had some, though not major, effects on deconcentration. Reif investigates other factors and hypothesizes, among other things, that firms which receive government support benefit from locations near government centers. A series of logit regressions indicates that wages, access to markets, a well-trained work force, union activity, and availability of water significantly affect firm location decisions, in contrast to the relatively less significant performance of government financial incentives. The work shows that strong economic tendencies must be overcome if any appreciable decentralization is to be achieved.

Addressing Urban Problems

Part IV of this book contains discussions of some of the significant problems that accompany urbanization. Among the most pressing are management of urban fiscal resources, housing, transport, and environmental protection.

Management of Urban Finance

Growing fiscal problems in cities of the developing countries have been caused in part by unprecedented urban growth, for which many countries are ill-prepared, and by the growing demands on local services. The demand for local services is sensitive to increasing population, especially of the poor. Positive income elasticities for public services and demonstration effects from the developed world also influence the demand for local services. Factors that affect the cost of local services include wages, labor unions, rising land and energy prices, inflation, and the increasing costs of borrowing funds for large urban infrastructure investments.

The major revenue sources—taxes, user charges, and external funding—tend to rise less than expenditures during urbanization, and the result is fiscal and service deficits. One solution to fiscal problems would be to reassign responsibility for urban services from local to central authorities, but Bahl and Linn (chapter 10) do not recommend this approach. An alternative solution is to increase local tax authority and make more use of property taxes and motor vehicle taxes. A third solution, also favored, is to encourage reliance on user charges (which have the advantage of being directly linked to services provided). Equity considerations and social costs (for instance, congestion) may, however, keep user charges low. A fourth solution, to increase fiscal transfers from central to local authorities, has many pros and cons but might be recommended if proper encouragement to cities can be combined with preservation of local autonomy. Reforms in urban financial arrangements in developing countries are proceeding slowly; political factors contribute to the inertia.

Housing Policy

In developing countries, housing is a major consumption category; it constitutes, on average, 15–25 percent of total urban household expenditures. Housing is also one of the most problematic areas in urban development. The most glaring aspect of the problem concerns sprawling squatter areas, delapidated shelter, and appalling lack of basic public services. Other dimensions of the problem are shortages of land, infrastructure services, off-site services, amenities, and employment opportunities and the inadequate supply and rising cost of housing.

For the overwhelming majority, housing is privately provided. Public authorities, however, implement licensing, building codes, zoning, and recordkeeping to ensure clarity in property rights. Governments almost universally have some active interest in housing finance. Overt programs of public housing for low-income groups are common. Housing policy must account for people's desires and should maximize incentives for individuals to expand the housing supply. Public interventions should be limited to areas where the public sector is best suited to perform, such as direct investment, pricing policy, and regulation.

To provide housing requires expertise in many areas. Ingram (chapter 11) stresses the need for understanding the underlying demand for housing. He analyzes housing demand by renters and owners in Bogotá and Cali, Colombia, for 1972 and 1978. Hedonic price coefficients for housing attributes are used to estimate the cost of a standardized unit of housing for each workplace, which is then used as the price variable to estimate a demand function for housing that includes other variables as well. The effect of income on the demand for housing is highly significant, and its elasticity is in the upper end of the range 0.2–0.8. Price performs less well: its elasticity appears to be less than one. Other variables include age and sex of the household head, family size, and distance to work.

Transport Issues

Transport influences the rate and pattern of urban development and presents multidimensional issues. Infrastructure in the form of roads and streets is publicly provided but entails private use. Urban transport planning requires road layout and in some cases provision for commuter rail transit. These large-scale projects are examples of investments that need rigorous benefit-cost analysis.

The planning of transport and other large urban infrastructure investments is complicated not only by income distribution considerations but also by the difficulty of taking account of the feedback effects of investments on urban development. If provision of services merely follows demand, infrastructure may be a bottleneck to development, and development opportunities may be lost. But if infrastructure leads development and, among other things, fosters new spatial patterns, several problems arise. Infrastructure services that do not closely follow existing patterns carry the risk that demand will not materialize as had been projected. As a minimum, benefit-cost analysis of urban projects might introduce spatial modeling to show probable future residential and business locations and to estimate urban development with and without the proposed project.

Another aspect of the urban transport problem is the provision of public transport, which again involves interactions between public and private decisions. In his analysis of public transport Pachón (chapter 12) points out that private organizations are responsible for most mass transit in Colombia, although local governments grant licenses and route authorizations. Disadvantages can arise from the political allocation of routes; examples are parallel routes, duplication of service, and information problems created by the multiplicity of routes. The system is, however, flexible and appears to be capable of handling the information problem.

Pachón gives an economic rationale for preferring small, less capital-intensive vehicles (such as school buses, minibuses, and collective taxis) over large metropolitan buses. The growth in the number of small buses in Bogotá is a result of lower costs, shorter waiting times, higher trip frequencies, and a greater income elasticity of demand for small-bus service. The desirability of old and of new buses is also relevant; an analysis of the age structure, operating costs, and profitability of Colombian buses is provided. Subsidies that encourage investments in buses, fare structures that favor new vehicles, and licensing requirements that restrict vehicle stocks are features of the Colombian system.

The dependence on public transport of a large part of the urban population, particularly the poor, heavily influences fares and services and increases government involvement. The Colombian analysis indicates the scope and problems of providing efficient services within this framework.

Urban Environment

Environmental problems are intimately related to urbanization because growing pollution in the developing countries has been caused largely by growth of activity in urban areas. Concern has been heightened as consciousness about pollution has spread worldwide. Thomas (chapter 13) analyzes policies for dealing with the key tradeoff between reducing environmental damage, on the one hand, and, on the other, paying the cost of pollution control and maintaining industrial competitiveness and growth.

In Brazil the capital and operating costs of air pollution control equipment and spare parts can be used to show how costs of pollution abatement vary among producers. Where effluents per unit of output decline with the size of a firm, it would be advantageous to require less than proportionate abatement for larger producers. An offsetting effect, however, is economies of scale in pollution control. The variation in pollution control costs by type and size of firm should be considered in devising policies that will achieve a given amount of environmental control at the lowest possible cost.

The damages to health from the high degree of air pollution in São Paulo are large by any standards and in comparison with the relatively lower risks in outlying areas and in Rio de Janeiro. A regression of the mortality rate on the pollution level, population density, per capita income, hospital beds per person, and percentage of people sixty-five years of age and older yields a positive and significant coefficient for particulates. For example, an annual increase of one ton of particulates per square kilometer in the Greater São Paulo metropolitan area is associated with an increase in mortality of twelve persons per million. The analysis emphasizes that benefits from a given amount of pollution reduction in an area will depend on the size of the population.

The most advantageous tradeoff between reducing environmental damage and maintaining growth can be achieved by a policy that allows industrial and spatial variation in pollution control rather than mandating uniform controls. A promising approach is to use emission taxes or pollution abatement standards that can be adjusted to conditions in different industries and districts.

Evaluating Urban Projects

The findings of this book point to net benefits from selected policy interventions that directly address selected urban problems. In this connection careful evaluations of intended and actual outcomes of urban programs would be helpful. Part of the work would be better evaluations of urban projects, many of which involve shelter. Keare (chapter 14) shows that rigorous evaluation of projects can assist in improving the efficiency and effectiveness of future endeavors in urban policymaking and in project formulation and implementation. Although much of the paper deals with specific shelter projects financed by the World Bank, the lessons drawn are likely to apply to policymaking as a whole.

The projects are evaluated on the basis of eight criteria: project design, the selection of project beneficiaries, construction methods, materials loan programs, housing completion, occupancy, maintenance of housing infrastructure, and community participation. Given a target group of beneficiaries and a policy objective (in this case, shelter), desirable projects are those that strive for efficient resource use through decentralized decisionmaking. Keare stresses market solutions whenever possible and presumes that project participants are the best judges of their own self-interests. In general, projects should provide participants with suitable locations, secure tenure, and adequate credit but beyond these should leave most decisions to the participants. Advantages and disadvantages are associated with construction projects, self-help requirements, housing standards, rentals, and restricted credit policies. The costs of delayed occupancy and inadequate maintenance and the importance of project cost recovery are stressed in this context.

Notes

1. Much of the information in this section is from World Bank (1984).

2. These estimates are based on Davis (1972), vol. 2, p. 51, and on more recent data from the World Bank.

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