

# PART THREE

## REFRAMING THE POLICY DEBATES



Can crowded cities in developing countries pull people in and power them out of poverty? Does migration help those who move and those left behind? How can trade help the world's wealthy and most destitute? What can policy makers do to address the three big challenges facing the developing world—a billion slum dwellers, a billion people living in remote and underserved areas, and the “bottom billion”? Part three of the Report provides the answer: economic integration. How? By using spatially blind institutions, spatially connective infrastructure, and spatially targeted incentives and calibrating the response to the difficulty of integration. Chapter 7 explains what economic integration means for metropolises, cities, towns, and villages. Chapter 8 proposes how integration between economically leading and lagging areas can benefit everyone. Chapter 9 lays out the difficult steps needed to successfully integrate the world's most isolated countries. In doing so, the chapters in part three revisit and reframe long-standing policy debates on urbanization, territorial development, and international integration.

# Concentration without Congestion

## *Policies for an inclusive urbanization*



A team of urban experts, as part of a routine exercise in 1974, forecast the size of the world's most populous cities in 2000. Kinshasa, the Democratic Republic of Congo's capital, would grow to 9 million, more than London today. Pakistan's Karachi would expand to 16 million, almost as large as New York City. The forecasts were way off (see figure 7.1). Kinshasa's population is about half of London's today, Karachi's about half of New York City's. Why were the experts, generally good at forecasting national populations, so wrong in predicting city sizes?

The reason: forecasting the spatial distribution of people in a country is not the same thing as predicting the size of its population. As shown in earlier chapters, spatial transformations—the growth of cities and leading areas—are linked closely to changes in the economy, especially the sectoral transformations that accompany growth and the opening of an economy to foreign trade and investment. So predicting the size of a city is *economic forecasting*, a hazardous occupation. Take Guangzhou in China. Its population in 2000 was more than a third larger than the 4.5 million predicted in 1974. Beijing's was half the 19 million predicted. The experts could not have foreseen China's economic liberalization and growth, which quickly would change the country's spatial structure. Simply extrapolating past trends, they should instead have examined the market forces of agglomeration, migration, and specialization—and the government policies that help or hinder them.

Projections now suggest that cities in developing countries will double in three decades, adding another 2 billion people. Indeed, large cities in developing countries will grow bigger to provide the urbanization economies sought by entrepreneurs, workers, and innovators. But this will happen mostly in economies that are doing well. Medium-size cities remain the backbone of urban systems, providing the localization economies that producers with more specialized needs seek. But they will flourish only where economies are industrializing. Smaller cities and towns continue to serve and to depend on surrounding rural settlements. But they will grow rapidly only in areas where farms and village economies are doing well.

The spatial transformations that lead to the rise of cities and towns will not be orderly. Informal settlements—slums and shantytowns—may form and expand as the rising demands of workers and firms outstrip the capacities of governments to institute well-functioning land markets and to invest in infrastructure and accommodation. If today's developed countries are a guide, it takes many decades to address within-city disparities and to absorb informal settlements into more organized city structures. Trying to restrict rural-urban migration can be counterproductive. Why? Because limiting density and diversity stifles innovation and productivity.

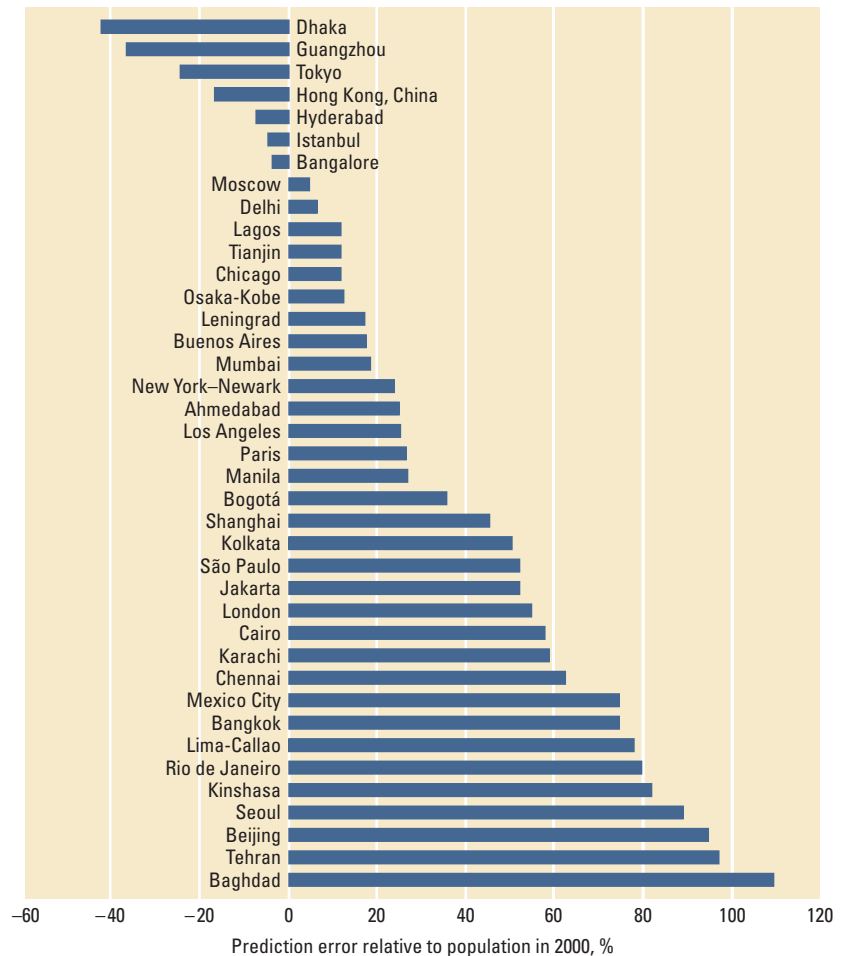
Policy makers, if they are not careful, can end up harming these transformations. By not instituting flexible regulation and versatile land use conversion, they can make urban areas inhospitable to firms and investors. By

not providing adequate water, sanitation, schools, and health care in rural areas, they can prematurely push villagers to towns and cities. By not investing enough in the infrastructure of rapidly growing cities, they can encourage congestion. More generally, by not responding appropriately to the needs of spatial transformations for different types of places, they cannot reap the full benefits of density and diversity, which congestion and division can undermine.

To help nations benefit from urbanization, this chapter proposes a policy framework—informed by the stylized facts of spatial transformations (chapter 1) and the insights about agglomeration economies that drive these changes (chapter 4). It outlines the policy priorities and their sequencing, using the experiences of countries that have urbanized well and of those that have struggled. The main messages:

- **Rural-urban transformations are best facilitated when policy makers recognize the economic interdependence among settlements.** Within a country's hierarchy of cities, towns, and villages, each specializes in a different function and has strong interrelationships with others. So the policy discussion should be framed not at the extremes of the national level or the individual settlement. Instead, it should be framed at the level of what is termed an "area," usually a state or province. Policy makers should see themselves as managers of the portfolio of places in such an area. An area approach can also inform national urbanization strategies. While area-specific urban shares in the population will determine priorities for all levels of government (central, provincial, and municipal), a nation's urban share can be a good guide to the overall complexity of its challenges.
- **Policy challenges become more complex with urbanization.** Cities and towns provide firms and families the benefits of proximity, but the compactness of activity produces congestion, pollution, and social tension, which can offset those benefits. Whether a policy is desirable depends on if it addresses the market's failures and abets concentration. In countries or areas with low

Figure 7.1 The growth of cities has been grossly overestimated



Source: Satterthwaite 2007.

Note: Comparison of predictions in 1974 with estimates of city populations in 2000. Bar indicates the extent to which the city population was overpredicted in 1974 relative to its size in 2000. A negative number indicates that a city size was greater in 2000 than predicted.

urban shares, for example, traffic congestion and slums may not be the major policy problems. But in rapidly urbanizing areas, congestion can quickly set in. And metropolitan areas may need, in addition, to address within-city divisions posed by shantytowns and slums.

- **Prioritizing and sequencing of policies can help governments facilitate inclusive urbanization even in the early stages of development.** Each dimension of the integration challenge requires a different family of instruments. For areas of incipient urbanization, the policy challenge is one-dimensional: build density with spatially blind institutions. For areas of intermediate urbanization, it is two-dimensional: build density and

reduce economic distance with spatially connective infrastructure. And for areas of advanced urbanization, it is three-dimensional: build density, overcome distance, and address the economic and social divisions—caused, say, by slums—with spatially targeted interventions. But at every stage, policy makers should emphasize the spatially blind institutions that encourage density in the right places.

The chapter first summarizes how urbanization policies can help places facilitate agglomeration economies. It next outlines a framework for economic integration to guide the management of a portfolio of places, using the experience of places that have urbanized successfully. It then discusses examples of the framework in action in today's developing countries.

### BOX 7.1 *Are the policy messages of this Report antirural?* No.

The economic geography of nations does not conform to a simple urban-rural split. A continuum of density gives rise to a portfolio of interrelated places. Symbiosis is the rule. At the head is a country's leading city, and below it, a spectrum of settlements—secondary cities, small urban centers, towns, and villages.

A low-income country's portfolio of places consists of primarily rural areas. At this phase of incipient urbanization, the mainstay of a strategy to facilitate spatial transformations necessary for economic growth is a set of spatially blind policies:

- Versatile and well-implemented regulations governing land markets to enforce property rights, safeguard land tenure, improve land transfers, ease land use conversion to reflect market needs, and bolster land taxation
- Basic and social service provision to improve education and health, increase productivity, and encourage mobility

- Sound macroeconomic policies to reduce market distortions, eliminate biases against agriculture, improve the business climate, stimulate competitiveness, and promote investment and adopt new technologies.

Such "aspatial" policies promote rural development—both in agriculture and the nonfarm economy—so that every place becomes better equipped to participate in industry and services.

These policies will disproportionately benefit rural households because the rural nonfarm economy typically accounts for 30–50 percent of rural employment. Likewise, rural households engage in diverse economic activities, with nonagricultural sources contributing 35–42 percent of household income. Growth in the nonfarm sector will stimulate growth in agriculture as inputs become cheaper, profits are reinvested in agriculture, and technological change allows better farming methods.<sup>a</sup>

Source: WDR 2009 team.  
a. Feder and Lanjouw 2001.

## Principles for managing a portfolio of places

Debates about urbanization often evoke images of overcrowded cities, visible concentrations of poverty, and appalling environmental degradation. This can result in a general policy stance to control urban growth and curb rural-urban migration. Geographically targeted interventions to clear or clean up slums that proliferated during low- and middle-income stages of development can end up dominating the discussion.

This chapter reframes the urbanization debate. Historical evidence suggests that urbanization in developing countries will continue to be rapid at early stages of economic growth—much of the rise in urban shares takes place before nations get to upper-middle incomes. But the rising density is to be welcomed if it produces agglomeration economies. The debate should not be mainly about the pace of urbanization, the amount of rural-urban migration, or the ways to eradicate slums with targeted interventions. Instead, it should be about the efficiency and inclusiveness of the processes that transform a rural economy into an urban one. And it should be about how policy can best address the coordination failures that arise at each stage of urbanization. "The poor are gravitating to towns and cities, but more rapid poverty reduction will probably require a faster pace of urbanization, not a slower one—and development policy makers will need to facilitate this process, not hinder it."<sup>1</sup> And because a rural-urban transformation involves both the urban and the rural, urbanization strategies must include measures to improve rural lives and livelihoods (see box 7.1).

### *The principle: maximize agglomeration economies across the portfolio of places*

Concentration, associated with rising density, brings potential benefits from "thick" markets. But it also brings congestion and squalor. The main aim of urban policy is to help settlements deliver agglomeration economies while reducing the grime, crime, and time costs that come with rising concentration. At different stages of urbanization, the binding constraints to promoting concentration

while controlling congestion differ, as do the priorities at each stage of urbanization.

- **Incipient.** Areas of incipient urbanization—with urban shares of about 25 percent—are predominantly agricultural or resource based, with low economic density. The priority is simply to facilitate agglomeration forces and to encourage internal economies of scale for plants, mills, and factories in towns. Because it is not yet clear which places will be favored by markets and for what purposes, neutrality between places should be the watchword for policy makers.
- **Intermediate.** As urbanization progresses, economic alliances strengthen within and between urbanized areas. Many firms and plants in the same sector colocate to take advantage of sharing inputs and knowledge spillovers. In such areas—with urban population shares of about 50 percent—the promotion of localization economies is the highest priority. Efficiency in production and transport is the watchword.
- **Advanced.** For highly urbanized areas, productivity and consumption benefits arise from urbanization economies associated with the diversity and intensity of economic activity. While functionality is the goal for industrial towns and cities, the watchword for postindustrial metropolises, with urban shares of about 75 percent, is livability.

**The policy rule: sequence and calibrate**

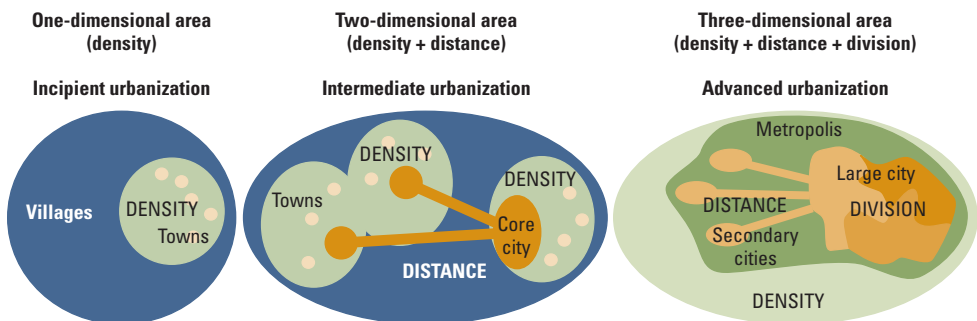
The spatial dimensions of density, distance, and division spotlight the policy challenge

in each of these types of place. In predominantly rural neighborhoods, the policy challenge is one dimensional and corresponds to the need to build density. In areas where urbanization has gathered momentum, the challenge is two dimensional. It incorporates the need to promote density and overcome problems of distance caused by congestion. In areas of advanced urbanization, the challenge is three dimensional. For metropolises, again, there is a need to encourage density and overcome distance. To this should be added the need to eliminate divisions within cities, which segregate the poor in informal slums from the rest, in formally settled parts (see figure 7.2).

**The unit for deliberating government action: an area**

Different parts of a country urbanize at different speeds. Unevenness is the rule, not an exception. And there are synergies and economic interdependencies among settlements of different sizes. Reframing urbanization policies to better meet the economic imperatives at all stages of the rural-urban transformation requires rethinking the spatial scale for deciding policy priorities and design. This Report makes the case for considering policies at an appropriate geographic scale: an “area,” or state or province, generally the middle tier of government between the central and municipal. The scale should be big enough to permit both rural-urban and interurban linkages. The experience of Beijing, Shanghai municipality, and Guangdong province supports a deliberately designed area approach to urban strategy. Two other areas

**Figure 7.2 The dimensions increase with the level of urbanization**



Source: WDR 2009 team.

in western China—Chengdu and Chongqing—are now taking the same approach to urbanization, with some success.

An area approach does not rule out the aggregation of urbanization strategies to a national level. High-density areas tend to have populations concentrated in metropolitan cities, intermediate-density areas in medium-size cities, and low-density areas in small towns and villages. In the same way, more urbanized countries have more of their people in high-density areas, and less urbanized countries have some high-density areas, but most people are in low-density areas. Urbanization policies should incorporate this unevenness of economic development.

A country's aggregate urban share can be a good indicator of the complexity of the urbanization challenges it faces. In the simplest case, one area may characterize an entire country, as for Singapore. For larger countries, a careful aggregation can help determine the priorities at different levels of government.

- In countries where urbanization is incipient, such as Ethiopia, with three-fourths of its population in rural areas, the integration challenge is unidimensional: facilitating density. To be sure, the capital cities and a handful of other cities even in predominantly rural nations face multidimensional challenges in their spatial transformation. But the top priority is the set of aspatial policy instruments that apply universally to all places—establishing market institutions to regulate land use and transactions, and delivering such basic services as security, schools, streets, and sanitation. So in the countries of Sub-Saharan Africa and Central Asia, the role of national governments is pivotal in laying the foundations of inclusive urbanization.
- Where urbanization is intermediate—as in many parts of the countries of East and South Asia such as India and China—central and provincial administrations must also build transport and communication infrastructure.
- Where urbanization is more advanced, as in the countries of Latin America, North Africa, and Eastern Europe, central, state, and municipal governments must synchronize efforts to facilitate the

geographic transformations for the push from middle to high incomes.

### A framework for integration

As urbanization advances, the policy imperatives change, with the instruments spanning the spectrum from spatially blind to spatially targeted. While the policy debates overemphasize the most spatially explicit of government actions, such as slum-upgrading programs, successful urbanization aimed at integrating every nation's portfolio of places requires the use of the full range of instruments—institutions, infrastructure, and incentives.

#### *Spatially blind “institutions” to facilitate economic density*

The responsibility for building institutions that will be the bedrock for urbanization in all parts of the country lies mainly with the central government. Chief among them are those governing the management of land. In this Report, “institutions” encompass three broad sets of measures: law and order (especially the definition and enforcement of property rights), the universal provision of basic services, and macroeconomic stability (see “Navigating This Report” for details). These are core mandates for the central government, and delivering them—or failing to—will alter the geographic distribution of economic activities forever.

The institutions governing land markets include a comprehensive land registry; credible mechanisms for contract enforcement and conflict resolution; flexible zoning laws; and versatile subdivision regulations that help, rather than hinder, the conversion of land for different uses. The transformation of the agricultural sector from one based on communal land rights to individual *property rights* is the sine qua non for urbanization. The evidence clearly shows that once property rights have been established and density is increasing, *land regulation and planning* can ensure the efficient coordination of different land uses. But if regulations are overzealous, they can hinder the benefits of density and agglomeration economies. Similarly, rigid *land use conversion rules*, which may be a consequence of inflexible regulations, can be detrimental to density, as are overly restrictive minimum



building standards. The fourth institution is adequate *housing finance*.

***Institutions for fluid land markets remain important.*** The property rights embodied in land titles are essential for converting assets into usable wealth.<sup>2</sup> The practical problems of titling, not least the cost of implementation, should not deter strengthening the legal framework for individual property ownership. Indeed, formal titles are necessary for functioning land and property markets. Although customary systems of tenure still permit informal transactions, the absence of formal titles hinders the conversion of land to areas of higher economic return. Informality is a brake on land development, constraining an efficient spatial transformation.

Consider preindustrial Europe. With more secure individual property rights to land, English cities grew rapidly.<sup>3</sup> Indeed, England may have been the first to industrialize because it introduced such rights before other European countries. The Nobel prize-winning economist Douglass North uses this to spotlight what land institutions can do for long-run growth and development.<sup>4</sup>

The “enclosure” movement made individual private property rights possible. Starting around 1500 open commons were fenced, hedged, or otherwise closed off and deeded or titled to individuals. By 1545 around 40 percent of England’s surface area belonged to private individuals. The Enclosure Act of 1604 fostered the conversion of open commons into private plots, which continued until the early twentieth century.<sup>5</sup> Most researchers agree that enclosures in England increased agricultural productivity, which released labor from the land, and provided the food surplus to support the rapidly increasing urban population.<sup>6</sup> This allowed England to become, for a time, the “workshop of the world.”<sup>7</sup> More evidence on how aspatial institutions initiate urbanization comes from Denmark (see box 7.2).

Another example of what widespread private property rights can do for growth, and for density, comes from North America and the countries of Latin America and the Caribbean. In the early period of European settlement, Canada and the United States were seen as having economic potential

similar to that of other parts of the New World (see “Geography in Motion: Overcoming Distance in North America”). After winning the Anglo-French Seven Years’ War of 1756–63, the British vigorously debated whether to claim the small Caribbean islands of Guadeloupe (1,628 square kilometers) or Canada (9.8 million square kilometers) as the spoils of victory.<sup>8</sup>

The development trajectories of North America and Latin America would diverge radically. In Latin America, the Spanish colonialists gave large tracts of land to a handful of individuals, along with the right to tax the local populace. Customary communal property rights determined land use, making people less willing to move. In North America, by contrast, there were few barriers to the acquisition of land, creating

### BOX 7.2 *Land reform to jump-start urbanization: aiding villeins in Denmark*

In central Copenhagen a “pillar of freedom” commemorates land reform. The monument honors the final abolition, in 1788, of “villeinage,” a form of serfdom common in Western Europe in the Middle Ages. At the beginning of the eighteenth century less than 1 percent of agricultural land was farmed by land-owning peasants, and large amounts of land were common property. Required to work for landlords, “villeins” could not move without their landlord’s consent. But starting in 1760, most communal land was transformed into private holdings. Between 1788 and 1807, landlords sold around half of their land to tenants. By 1835 almost 65 percent of the land was owner occupied.<sup>a</sup> A few decades later, Denmark experienced a “take-off” into industrialization and urbanization.

This urbanization did not mean rural squalor. Structural, technological, and institutional changes reduced the value of tenancy to landlords, increasing the economic leverage of tenants. In a 1784 decree the century-old obligation of landlords to collect taxes on behalf of the state was waived on land the landlord sold to their former tenants.

In 1788 the abolition of villeinage further improved the bargaining power of tenants. Policy interventions in the credit market also helped. In 1786 two public credit institutions were established to provide loans for land purchases, complementing an already rather active and efficient private credit market. The result: credit did not constrain many prospective buyers.<sup>b</sup>

Market-based transactions, facilitated by government land policies, formed a large class of owner-occupier farmers, later a driving force behind Denmark’s 1849 Constitution and emerging democracy. By promoting education for the poor and for rural residents, they also spread basic services and gave a strong impetus to industrialization and small towns.<sup>c</sup> Denmark’s population rose sharply—in preindustrial societies, a growing population is a sign of prospering agriculture. After 1890 agriculture fed a surge of industrial growth in small towns<sup>d</sup> instrumental in Denmark’s industrialization.<sup>e</sup>

Contributed by Thomas Markussen.  
a. Henriksen 2003. b. Henriksen 2003.  
c. Henriksen 2003. d. Pedersen 1990.  
e. Christensen 2004, p. 1.

land markets and a predominantly owner-operated agricultural sector on the western frontier.<sup>9</sup> The U.S. Homestead Act of 1862 gave individuals the right to 160 acres of unoccupied public land, the early foundation of a strong property rights system.

Contemporary research confirms the role of well-enforced individual property rights. A study of 80 countries finds that institutional quality does more for long-run growth than either geographic factors or a country's openness to trade.<sup>10</sup> Another study of 75 countries finds that security of property rights, as measured by an index of expropriation risks, aids development. And when such institutional effects are accounted for, physical geography has weak effects on a country's average income.<sup>11</sup>

In incipient urbanization areas or in nations where the rural share is high, the institutions governing property rights may be both the base and the mainstay of the policies for a rapid and sustainable urbanization. By contrast, when there is no secure individual land and property rights, land transactions and urbanization may become divisive. Consider China, where land is collectively owned in rural areas and farmers do not enjoy clearly defined or fully protected land property rights. There, the conversion of land to industrial use generates social conflict because farmers perceive land confiscation as inappropriate without fair compensation. The problems are similar in many Sub-Saharan African countries, where 90 percent of the land is communal.

***Land use and building regulations become important as urbanization advances.*** Governments regulate land markets for two reasons. First, regulation can ensure the appropriate separation of land between different uses, such as preventing the location of heavily polluting industries in residential areas. Second, it can ensure the integration of private and public uses of land, such as providing space for transport infrastructure in densely populated areas. But land use regulation can be overzealous, upsetting the delicate balance between the public interest and private opportunity.

A city's future depends on investor confidence in its prospects and its responsiveness to future changes in the demand for land.

Overly stringent regulations undermine investor confidence and unnecessarily distort housing markets. Consider Mumbai.<sup>12</sup> Overly restrictive land and building regulations have put unnecessary upward pressure on land and property prices, hampering the city's competitiveness. Height regulations hold Mumbai's buildings to only between a fifth and a tenth of the number of floors allowed in major cities in other countries. The city's topography should exhibit a high-density pattern similar to that in Hong Kong, China, but it is instead mostly a low-rise city (see box 7.3). Half of all poor workers commute less than 2 kilometers to work.

Stringent restrictions on land use conversion produce shortages of affordable housing, hurting migrants to a city. For this reason, the average ratio of the median house price to the median annual household income in many African and Asian cities is twice that in many large U.S. cities.<sup>13</sup> Bangladesh has a per capita income of \$1,230, less than 3 percent of the U.S. per capita income of \$44,070.<sup>14</sup> But in Dhaka prime land prices are similar to those in New York City. As much as 20 percent of the city's inner area is underserved. Tracts of centrally located, publicly owned land remain idle and underdeveloped, while the rest is allocated for low value-added uses—a cantonment, public housing, and residential areas for government workers.

Stringent land development parameters—including minimum plot sizes and road widths, setbacks, and land for communal facilities—exclude a majority of households from formal land ownership. Indeed, although the underlying plot might be titled, the dwelling may be rendered illegal because of the failure to meet official construction standards. Without a downward revision of standards, the benefits of legal title are lost. Such legal codes also contribute to red tape and excessive housing costs.<sup>15</sup> In Addis Ababa high construction standards have relegated many low-income households, which might otherwise possess a tradable title, to the ownership of “illegal property.”<sup>16</sup>

In 1979, the federal government in Brazil, by passing a national land use regulation setting a minimum lot size of 125 square meters and frontage of 5 meters, effectively



**BOX 7.3** *Bombay fights the markets, and more than half of Mumbai's residents live in slums*

The city of Mumbai, once known as Bombay, provides sobering lessons. In the 1960s and 1970s, city planners decided that Bombay's population should be controlled at about 7 million. Land regulations and infrastructure policies were designed accordingly. But people flooded into the city anyway, and today the city is more than twice the intended size, with the highest population density of any metropolitan area in the world. Estimates indicate that 54 percent of Mumbai's 16 million people now live in slums, and another quarter in degraded apartments.

The Floor Space Index (FSI)<sup>a</sup> regulations in Mumbai were introduced in 1964, stipulating the maximum building space for every square meter of the plot of land. In Mumbai it was set at 4.5. The standard practice in cities with limited land is to raise the permitted FSI over time to accommodate urban growth, as in Manhattan; Singapore; Hong Kong, China; and Shanghai. Instead, the Municipal Corporation

of Greater Mumbai went the other way, lowering the permitted FSI to 1.33 in 1991. Almost all buildings in Mumbai with an FSI exceeding 4.5 were built before 1964. Under the rules that existed until recently, new buildings, including those in the central business district, were subject to the FSI of 1.33. As a consequence, space consumption in Mumbai averages 4 square meters, much less than the 12 square meters in Shanghai and the more than 20 square meters in Moscow. And about half of its residents are huddled within 2 kilometers of the city center (see the figure below).

Meanwhile, high housing costs account for as much as 15–20 percent of the income of a low-income family. Rent control regulations freeze 30 percent of Mumbai's housing stock, leaving it dilapidated because landlords see little point in investing. Weak property rights imply that only 10 percent of the housing stock has legal title, so land redevelopment

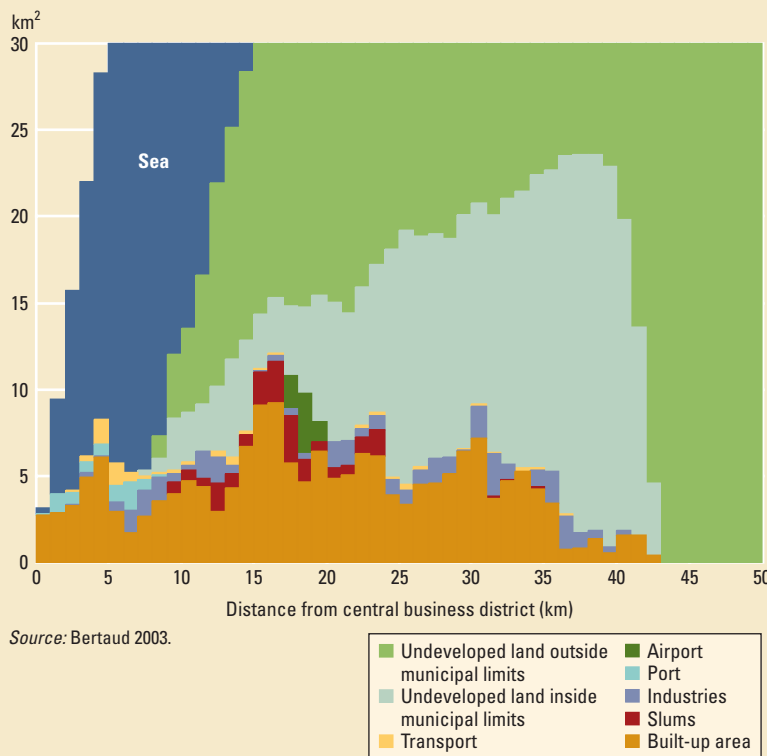
is curtailed. The government relies on property taxes and on inflated real estate prices for revenue, so it has little incentive to fight the groups that resist relaxation of building height restrictions.

The result is a vicious circle of supply shortages and high land prices. Mumbai slipped from 25th place to 40th in the league table of "best cities for business" between 1995 and 1999. It remains India's premier business city—it topped Chennai and Bangalore in investment in 2007 and was the top destination for domestic migrants. But how quickly it reforms its regulations and builds infrastructure will decide how long it will keep this position.

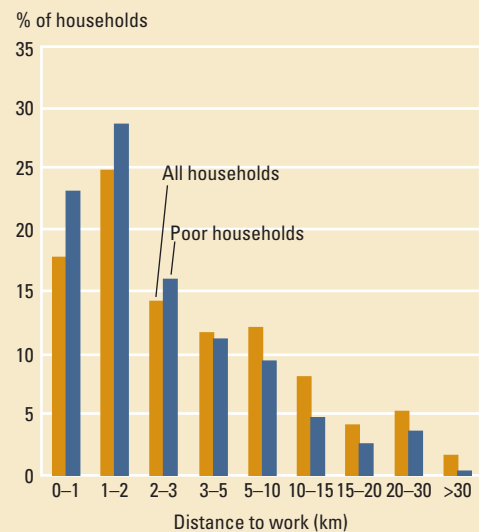
Source: WDR 2009 team; Bertaud 2003.

a. The FSI is the ratio of the total floor space in a building to the area of the plot on which it is built. For example, suppose a building covers half of a plot that is 1,000 square meters in size. If this building has 10 floors, it exhibits an FSI of 5.

**Land should be used better in Mumbai, and people should not live so close to work**



Source: Bertaud 2003.



Source: Baker and others 2005.

excluded many low-income residents from access to land in the formal sector. Many suburban low-income developments could not meet the 125-square-meter requirement, but were built on land owned by developers. Outside the formal sector, such developments could not be legally supplied public services. So more than half the population in regional capitals, such as Recife and Salvador, lives in slums or informal areas.<sup>17,18</sup> After democratization in 1988, cities were encouraged to service the informal sector. Although the national minimum lot size requirement remained in place, areas could be designated as Special Zones of Social Interest and exempted from the requirement as part of a package to secure tenure and improve services.

Land market restrictions can have adverse spillovers on the urban economy and blunt the instruments intended to aid urbanization. Unless basic institutions for land markets and social services are in place, infrastructure development will be hindered, and spatially targeted interventions will likely be ineffective.

**Regulations for housing finance affect urbanization.** Since the deregulation of financial systems in the second half of the 1980s, market-based housing financing has expanded rapidly. Residential mortgage markets are now equivalent to more than 40 percent of gross domestic product (GDP) in developed countries. But those in developing countries are much smaller, averaging less than 10 percent of GDP.<sup>19</sup> The public role should be to stimulate well-regulated private involvement. For example, private initiatives of the type developed by the Grameen Bank in Bangladesh, Bancosol in Bolivia, and the Housing Development and Finance Corporation in India show that uncollateralized lending can nourish housing finance even in countries with budding financial systems and weak legal and regulatory structures. Establishing the legal foundation for simple, enforceable, and prudent mortgage contracts is a good start. When a country's financial system is more developed and mature, the public sector can encourage a secondary mortgage market, develop financial innovations, and expand the securitization of mortgages.<sup>20</sup>

Occupant-owned housing, usually a household's largest single asset by far, is important in wealth creation, social security, and politics. People who own their house or have secure tenure have a larger stake in their community and thus are more likely to lobby for less crime, stronger governance, and better local environmental conditions.<sup>21</sup>

### ***Spatially connective infrastructure to reduce distance to density***

Policies to unify land markets and facilitate labor mobility remain important for the buildup of economic density at all stages of urbanization. But they are not enough for dealing with the more complex challenges of advancing urbanization. In Seoul and Shanghai, downtown traffic averages 8 kilometers an hour; in Bangkok, Manila, and Mexico City, it averages 10 kilometers an hour or slower; in Kuala Lumpur and São Paulo, it averages 15 kilometers an hour or slower. Workers in Jakarta, Kinshasa, Lagos, and Manila spend on average 75 minutes commuting to work.<sup>22</sup> For such areas, congestion can eat away the benefits of rising density. Spatially connective infrastructure must join the spatially blind institutions as priorities for inclusive urbanization.

**Connective infrastructure needs institutions.** Successful cities react to growing traffic congestion with spatially connective infrastructure. But preceding such infrastructure in all successful cities (or accompanying it in the fastest urbanizers) is a fluid land market and an empowered local government. The sequencing of policies should be spatially blind measures to create conditions suitable for economic concentration, followed by connective policies to deal with congestion.

The United Kingdom in the nineteenth century is illustrative. With systems of governance varying widely across towns, the Reform Act of 1832 and the Municipal Corporations Act of 1835 brought about regularization of municipal government.<sup>23</sup> Municipal authorities could take over privately owned sewerage, water, and gas systems. By the 1880s they had started purchasing land to compete with private utilities, transport, and other services. In doing

so, they unified the hodgepodge of preexisting private systems, separating sewage and drainage systems from the water systems, and extending the reach of basic services to poor areas.<sup>24</sup> The Land Enquiry Commission recognized that “*municipal land ownership, town planning and the building up of the system of transit will go hand in hand and each will help the other.*”<sup>25</sup> By the end of the nineteenth century, institutions governing land markets were maturing and adapting to the changing urban requirements.<sup>26</sup>

With this as background, the United Kingdom’s urbanization was rapid. In 1830 the average GDP per capita was \$1,749 (in 1990 international prices), roughly equivalent to Honduras, Mozambique, or Pakistan in 2003.<sup>27</sup> The urban share rose from 28 percent in 1830 to 69 percent in 1910.<sup>28</sup> At the top of the urban hierarchy: London, whose population grew from 2 million in 1830 to 6.6 million in 1900.<sup>29</sup>

***Institutions and infrastructure must evolve continually.*** As areas urbanize and nations develop, the networks for public transit become more complex, and institutions such as legislation governing land use must also adapt. Building a new transport network requires the purchase of contiguous plots of land, and holdouts can extract huge rents or thwart the project entirely. Compulsory purchases (“*eminent domain*” in the United States) may be necessary, with the safeguard of just compensation for land owners. Another safeguard is that the acquired land be for “*public use,*” although how widely this should be interpreted can be contentious.

The United States, by the mid-nineteenth century, had a reasonably well-defined system of property rights. As New York’s transportation network expanded, and the needs of the city changed over the past century, its institutions evolved. The 1916 Zoning Resolution has been amended to respond to shifts in population and land use. Waves of immigration helped swell the city’s population from 5 million in 1916 to almost 8 million in 1960. New mass transit routes and growth corridors were created. And with the rise of the mass-produced automobile, car registrations in New York State exploded from 93,000 in 1915 to about

2 million in 1930.<sup>30</sup> To address ever more complex urbanization, the City Planning Commission was created in 1938. After studies and public debate, the 1916 Zoning Resolution was replaced in 1961. The new resolution incorporated parking requirements and emphasized open space.

Although based on the leading planning theories of the day, aspects of those zoning policies have revealed shortcomings over the years. The emphasis on open space has sometimes resulted in buildings that overwhelm their surroundings. Since then, new approaches have been developed to make land use conversion more responsive to changing needs. A more flexible approach at the Department of City Planning encourages a mix of uses that creates lively urban streetscapes that can sustain increased density.<sup>31</sup>

New York City provides an example of the changing spatially blind institutions necessary for spatially connective policies. Indeed, their interaction enabled the density of Manhattan, the Bronx, Brooklyn, and Queens to increase from 230 people per square kilometer in 1820 to more than 5,000 in 1900 and about 12,000 today.

***Successful urbanization requires connecting ever wider areas.*** Inevitably, density brings crowding. New York shows the enormous benefits of an efficient metro system in reducing congestion while encouraging density. The key is an integrated system of mass transport (see box 7.4). Dense city centers and skyscrapers are feasible only when thousands of office workers can be transported efficiently to downtown offices.

Long-term success does not rule out occasional bouts of congestion, but it does require flexible institutions. A British pamphlet published in 1860 observed that

[F]rom day to day, and from year-to-year, the streets of London become more and more crowded, and must . . . come to a dead-lock between Westminster and the City, unless some more efficient remedy can be provided. The great City lies as it were handcuffed, panting and exhausted under the weight of its own wealth.<sup>32</sup>

London’s congestion appeared no closer to resolution in 1939, with traffic averaging

#### BOX 7.4 *Widening the reach of New York City*

New York's subway system has become one of the busiest and most extensive in the world, serving nearly 5 million passengers every day with 26 train lines operating on 800 miles of track. As New York City spread into a wider metropolitan area, commuter bus networks and rail lines grew. New York City's commuter rail system is the most extensive in the United States, with about 250 stations and 20 rail lines serving more than 150 million commuters annually.<sup>a</sup>

Public transportation in New York City began in the late 1820s with horse-drawn omnibuses. The first steam-driven cable car line opened in 1883. In 1909 electric trolleybuses replaced them, and for 70 years trolleybuses ran in all five boroughs of New York City. The first elevated line ("el") opened in 1868. By 1880 most Manhattan residents were within a 19-minute walk of an "el," which took passengers above the congested streets.

The mid-1880s saw rapid immigration. Overcrowding was rife. As in London, an underground rail network was seen as necessary. But it took a blizzard in March 1888, completely paralyzing the streets, to provide the impetus for an underground rail system. The subway was designed both to move people about within Manhattan, and to connect tracts of undeveloped land.

After years of political wrangling, a plan for a subway was approved in 1894. In 1904, the Interborough Rapid Transit Company opened and carried

more than 100,000 passengers on the day of the opening ceremony. Subway trains, at close to 40 miles an hour, were much faster than trolleys (6 miles an hour) and elevated trains (12 miles an hour). More people could now be moved at faster speeds.

It has been a never-ending struggle to expand the transport system fast enough to accommodate population growth. Most of the subway system in use today was built between 1913 and 1931; the number of annual rail passengers jumped from 500 million in 1901 to 2.5 billion in 1929.<sup>b</sup> In 1940 the city unified the three independent subway lines under public ownership, allowing for a more integrated approach to transport development.

The payoff is inclusive and sustainable urbanization. New York's Metropolitan Transportation Authority has served a 5,000-square-mile region since 1968. According to the 2000 U.S. census, New York City is the only locality in the United States where fewer than half of all households own a car—the figure is even lower in Manhattan at fewer than a quarter—compared with 92 percent nationally. One in every three users of mass transit in the United States and two-thirds of the nation's rail riders live in New York City and its suburbs.<sup>c</sup>

Source: WDR 2009 team.

Note: a. The New York City Transit Museum Teacher Resource Center, and the Port Authority of New York and New Jersey Official Web site. b. The New York City Transit Museum Teacher Resource Center. c. The New York City Transit Museum Teacher Resource Center.

8 miles an hour,<sup>33</sup> not so different from the 10–11 miles an hour in central London today.<sup>34</sup> This may suggest an "equilibrium level" of congestion. The city's economic density consistent with this equilibrium depends on the quality of spatially connective infrastructure. In this sense, the value of additional investment in such infrastructure is not as much in the long-run abatement of congestion as in the continually rising economic density for any given level of congestion. Congestion is the result

of the substitution of one scarce resource, travel time, for another even more scarce resource, land. It is not efficient to devote so much urban land to roads that congestion is completely eliminated. Some urban congestion is likely to be optimal, if for no other reason than to prompt policy makers to review and update institutions and infrastructure.

As cities specialize, intercity infrastructure becomes a priority in the most dynamic areas. There is a symbiosis between cities and their peripheries, but economic relationships also join other cities in an urban hierarchy. Transport links between cities reinforce agglomeration economies and generate complementary and specialized functions. In the United States the megalopolis stretching from Boston, through New York City, Philadelphia, and Baltimore to Washington along the northeastern coast is linked by highways and rails (the first freight rail link was between Baltimore and Washington in 1827).<sup>35</sup> Japan also invested in spatially connective infrastructure to link its two largest agglomerations Tokyo-Yokohama and Osaka-Kobe (see box 7.5).

In the Republic of Korea, Seoul-Incheon (in the northwest) and Pusan (the second largest city at the southeast tip) were linked as early as 1905 by the Gyeongbu Rail, and in 1970 by the 400-plus-kilometer Gyeongbu Highway. In 2004 the bullet train—the Korea Train Express—connected the two cities in two hours' travel time. In the Pearl River Delta—a region of China studded with factories and interwoven by freeways—the economies of several cities are linked together so effectively that, according to the chief executive officer of a large electronics manufacturer, "In practice, we are a single vast factory scattered across the territory."

**Demand management and public transport encourage development of higher density.** There are many instruments to increase connectivity, among them—<sup>36</sup>

- Improving transport options—say, through better transit management that increases the use of, or gives preference to, high-occupancy vehicles
- Managing land use—through transit-oriented development or smart growth that gives preference to new develop-

### BOX 7.5 *Promoting concentration in Japan between 1860 and 1980: spatially connective policies for Tokyo-Yokohama and Osaka-Kobe*

Japan's manufacturing industries are spatially concentrated—a trend that can be traced to the Meiji era starting in the 1860s. In Tokyo both state-owned factories and private industrial complexes were concentrated along the main river. Gradually small machinery workshops conglomerated, and industries expanded toward the south along the new Tokaido railway connecting Tokyo, Yokohama, and areas farther south.

After World War II, when exports to the United States began to accelerate, industrial production became concentrated in the Keihin industrial zone around Tokyo and Yokohama, and in the Hanshin industrial zone around Osaka and Kobe. This led to heavy traffic congestion, water shortages, and air and water pollution. In 1962 the Japanese government responded by instituting *Zenso*—the Integrated Spatial Development Plan—which aggressively developed the Pacific Ocean Industrial Belt by linking the core agglomerated areas between Tokyo and Osaka and establishing new industrial zones in between. The investments included the bullet train (Shinkansen) and other trunk railways, expressways, and ports (see the map to the right).

Despite heavy infrastructure investments in new industrial clusters in more remote regions, they could not attract industries out of the Pacific Ocean Belt. During the miraculous growth era of the 1950s through 1970s, industries remained spatially concentrated, thanks to the mobility of workers, even though there has been massive relocation of industries from the congested core to surrounding new industrial areas. Enterprises that remained in core urban clusters upgraded from standardized products to high-tech products and new models by taking advantage of urbanization economies accruing from diverse economic activity and a large pool of skill and talent. Other enterprises retained their central management functions in the core agglomerations to benefit from the convenience of face-to-face communications with banks, government offices, and major industrial organizations.

Industries that left the traditional industrial cores were mostly exporters of machinery and electronic appliance plants. They continued to enjoy localization economies from producing similar and related products in new clusters. Their locations alongside the Tomei highway connecting Tokyo and Nagoya gave easy access to markets and high-tech enterprises in the urban centers.

The geographic distribution of industries over several decades of rapid growth reflected the government's efforts to

promote concentration while preventing the grime and time costs of rising density. These efforts did not interfere with the profit motives of enterprises, but instead strengthened agglomeration economies. Government policies and market forces reinforced each other spatially to sustain economic growth.

Contributed by Keijiro Otsuka and Megumi Muto.

Sources: Fujita and Tabuchi 1997; Sonobe and Otsuka 2006; Whittaker 1997; Overseas Economic Cooperation Fund 1995.

#### Connected cities in Japan facilitate agglomeration economies in Tokyo-Yokohama (Keihin) and Osaka-Kobe (Hanshin) by road and rail



Source: WDR 2009 team.



ments along established public transport routes

- Launching general policies and programs—such as freight transport management and market reforms.

Pricing mechanisms can be most effective in optimizing private car use. Extreme but effective are Singapore's auction permits to purchase cars. Add the car taxes, and the cost of a car in Singapore is four to five times the world price. Amsterdam, London, and Stockholm also have schemes that price road use according to the time of day and level of congestion—substantially reducing peak-time car traffic and car emissions. The revenue streams from congestion charging could be earmarked for reinvestment in public transportation. But such schemes require substantial investment in technology to ensure the efficient collection of fees.

Easier to implement are simple regulations or traffic plans that reduce the number of vehicles in specific parts of a city or overall. In Tehran entry to parts of the city center is restricted to essential traffic. Budapest and Buenos Aires have pedestrian-only zones in the city center, easily reached by public transport. Gothenburg (Sweden) and Bremen (Germany) restrict private car links between different zones (“cells”), encouraging public transit. India's Chandigarh built some 160 kilometers of wide-cycle paths to ease traffic on arterial roads.<sup>37</sup> The most popular restraint limits the use of vehicles on specific days according to their registration plate number, as in Athens, Bogotá, Lagos, Manila, Mexico City, Santiago, São Paulo, Seoul, and Singapore. Such measures have been proven easier to enforce than expected, with widespread public acceptance.<sup>38</sup>

Demand management is the most cost-effective means of increasing mobility. But traffic will increase even with the best policies, especially in rapidly growing cities. Investments in public transport infrastructure can connect different parts of a city and guide land use and urban expansion. Mass rapid transit includes subways, suburban rail, and dedicated busways, all having a capacity and performance far superior to

buses operating on unsegregated and congested roads. But suburban rail and subways require huge investments in fixed capital, so dedicated busways (plus their more sophisticated relation, “bus rapid transit”) have been gaining in popularity.

Busways, most common in Latin American cities, cost about \$10 million a kilometer to install. Operating in Bogotá, Colombia; Curitiba and São Paulo, Brazil; and Quito, Ecuador, they are being planned or built in many other cities. A more expensive alternative, ranging in cost from \$10 million to \$30 million a kilometer, is light rail, a modern form of tram covering short distances. It usually feeds a larger system of heavy metro rail. Cities with light rail include Hong Kong, China; Kuala Lumpur; Singapore; Sydney; and Tunis.

The most costly mass rapid transit option is the metropolitan subway system, which has the largest capacity. Building costs average more than \$100 million a kilometer, explaining why there are fewer than 200 systems in the world, mostly in industrialized countries.<sup>39</sup> But their number is growing: China, India, and the República Bolivariana de Venezuela have built subways. When cities reach a certain size and density, a subway is the only transport mode capable of moving large numbers of people to concentrated job centers. The benefits that come from enabling such density include efficiency and productivity gains—traditionally in industry, increasingly in services (see chapter 4)—but also lower energy consumption, less pollution, and greater compactness, which increase interaction and encourage nonmotorized transport for short intracity trips. Compact and densely packed cities might also meet the imperatives of climate change (see box 7.6).

Public transport, successful on its own, has encouraged new developments at higher densities, which in turn permit more successful public transport while reducing the economic distance between places. Managing all this takes patience and the discipline to build from the bottom. The establishment and strengthening of land and property market institutions—including secure property rights, flexible land use regulations, and ease of land conversion—is not

### BOX 7.6 *Climate change calls for a different urban form, not slower urbanization*

Urbanization is associated with industrialization, which increases emissions of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases. And increasing wealth tends to be associated with higher energy consumption, for instance through motorization. But to be concerned about the climate does not mean that urbanization should be slowed. If anything, economic density may need to be encouraged even more.

Historical data going back to the nineteenth century show that today's rich countries experienced rising per capita carbon emissions as they urbanized and industrialized through the twentieth century.<sup>a</sup> Industrialization, motorization, and consequently carbon emissions in developing countries follow the trajectories of developed countries in their earlier stages of development.<sup>b</sup> For instance, per capita carbon emissions in Germany doubled from 0.8 metric tons of carbon in 1880 to 1.6 in 1900. In the United States and the United Kingdom, carbon emissions were about 2.5 in 1900. Today's developing countries have lower average emissions at the equivalent GDPs per capita of Germany, the United Kingdom, and the United States in 1880 and 1900. Botswana's carbon emissions were 0.36 per capita in 1987 and 0.57 in 1996 (see figure at right).

The trend in most developing countries suggests continuing growth in carbon emissions both in total and per capita. The policy response to the projected increases in urbanization and carbon emissions in developing countries should not be to try to prevent the growth of cities. This would not be feasible or desirable in light of the evidence on growth and poverty reduction. Instead, growth in cities—many of which might double in size over the next few decades—should be managed to create urban areas far more carbon efficient than many of today's mature cities.

Monocentric structures and high population densities tend to reduce the length and number of motorized trips.<sup>c</sup> Compact cities use less energy for transport, consume less land for housing, and use less energy for heating. Several studies find that high population density is negatively

correlated with carbon emissions.<sup>d</sup> At the national level, Sweden and Japan have used incentives and regulation to greatly reduce the emissions intensity of their economies. At the urban level, an emphasis on density and smart choices that reduce distance can help do the same. This requires land use policies that favor compactness and transport policies that guide urban form and provide convenient and efficient public transit.<sup>e</sup>

Atlanta and Barcelona illustrate alternative urban growth scenarios. They had similar populations of 2.5 million to 2.8 million, but Atlanta had a density of six people per hectare in 1990, and Barcelona had 176.<sup>f</sup> In Atlanta the longest possible distance between two points within the built-up area is 137 kilometers; in Barcelona, the distance is only 37 kilometers. Per capita CO<sub>2</sub> emission was 400 metric tons in Atlanta, 38 tons in Barcelona.<sup>g</sup> Atlanta's metro network is 74 kilometers long, but only 4 percent of its population is within 800 meters of a metro station. Barcelona's metro

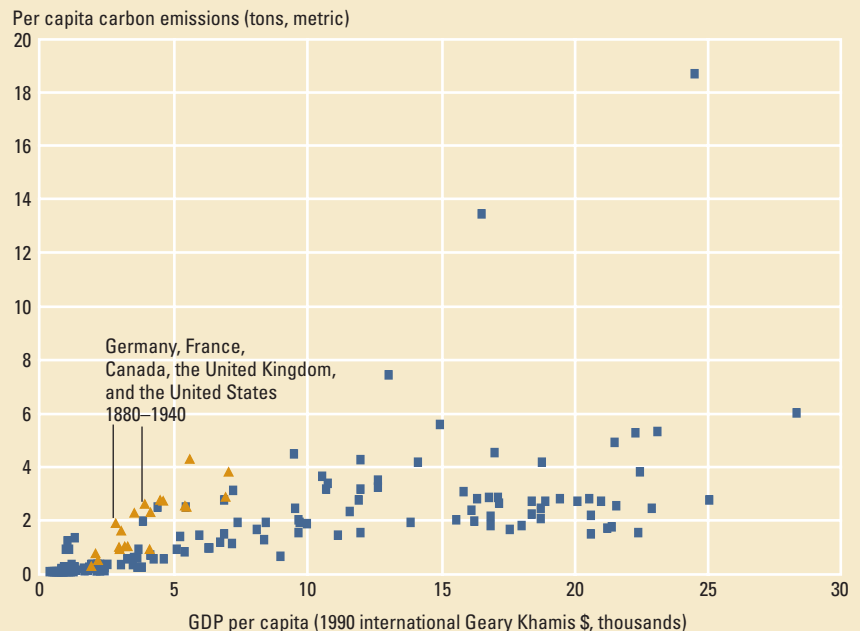
network is 99 kilometers, and 60 percent of its population lives within 600 meters of a metro station. Only 4.5 percent of trips are by mass transit in Atlanta, a fraction of the 30 percent in Barcelona. For Atlanta to achieve Barcelona's metro accessibility would require building an additional 3,400 kilometers of metro tracks and about 2,800 new metro stations. This would allow the Atlanta metro to transport the same number of people that Barcelona does with only 99 kilometers of tracks and 136 stations.

Density makes the difference.

Source: WDR 2009 team.

a. Marland, Boden, and Andres 2007. b. World Bank 2002, figure 2.1; Lanne and Liski 2003, figures 1, 4, and 5; and data in developing countries from [http://cdiac.esd.ornl.gov/ftp/ndp030/nation.1751\\_2004.ems](http://cdiac.esd.ornl.gov/ftp/ndp030/nation.1751_2004.ems). c. Bento and others 2003. d. Scholz 2006; Vance and Hedel 2006; Golob and Brownstone 2005; Ingram 1997; International Union of Public Transport. e. Bento and others 2003; Scholz 2006; Vance and Hedel 2006; Golob and Brownstone 2005. f. Bertaud 2004. g. Kenworthy 2005.

#### Countries can change their energy trajectories



Sources: Carbon emission data worldwide can be found in the Oak Ridge National Laboratory, U.S. Department of Energy at [http://cdiac.esd.ornl.gov/ftp/ndp030/nation.1751\\_2004.ems](http://cdiac.esd.ornl.gov/ftp/ndp030/nation.1751_2004.ems); Lanne and Liski 2003.

easy. But without the commitment to such institutions, and without investment in connective infrastructure, targeted interventions to deal with slums are unlikely to work.

***Spatially targeted interventions to reduce social and economic divisions***

For the three-dimensional problem faced by advanced urbanization areas, spatially blind and connective instruments must be supplemented with spatially targeted interventions to address the social and economic division within a city's boundaries—most visibly, slums. The lesson of experience is that spatially targeted efforts succeed when they are applied where land markets work reasonably well, basic social services are widely accessible, and a connective infrastructure links the city's core to its periphery.

***Institutions and infrastructure are prerequisites for successful interventions.***

Successful programs to integrate slums have been built on a foundation of spatially blind and spatially connective policies. This integration included the establishment of institutions to effectively govern the working of the housing market, a spatially blind provision of social and basic services to all settlements, and transport infrastructure investments to connect the newly created housing areas.

Slum clearance requires a legislative basis to empower local authorities to take action and institutions to facilitate an orderly conversion of land from agricultural to residential or other purposes. At the same time, suburban development is made feasible through the provision of basic amenities and social services alongside ongoing improvements in the transport connectivity of cities with their suburbs and surrounding counties.

In London social outcry at the dreadful conditions of Victorian slums provided the impetus for slum clearance and improvement. But the efforts were preceded by steps to improve housing markets and transport systems. The Housing of the Working Classes Act 1890 provided local authorities with the power to build houses for the working classes and to clear areas of unfit housing. An amendment gave local

authorities powers to retain the houses built under slum-clearance schemes, paving the way for future public housing schemes. Better transport was part of the solution, evidenced by conferences in 1901 on the subject of "Improved Means of Locomotion as a First Step towards the Cure of the Housing Difficulties of London." The conferences passed a resolution that "a complete system of transportation radiating from urban centers, and which shall be cheap, rapid, and under municipal ownership, is a primary step towards dealing with the housing problem."<sup>40</sup> Londoners obviously understood that connective policies must precede targeted interventions.

Indeed, the link between improvements in spatially connective transport infrastructure and the solution of London's slum problem was made clearly in the policy discourse of the time. In 1890 the Cheap Trains for London Workers Bill proposed extending the provision and further regulating the fares on "workmen's trains." The private railway companies already had been obliged by law to introduce these trains in 1883, to provide an affordable means of commuting to working-class workers who lived in the suburbs but earned their living in central London. By lowering the cost of commuting, the suburbs could be developed, decongesting London's central areas.

Likewise, during the late-nineteenth and early twentieth century, governments across North America and Western Europe implemented large-scale slum clearance and re-housing. Landowners were compensated, and the cleared land was sold for redevelopment. These programs would not have succeeded without a rapid expansion of transport infrastructure. New transport systems helped "open up" the outskirts, or suburbs, of cities, making periurban housing attractive for both real estate developers and urban workers. The resulting flight to the suburbs was also both a cause and a consequence of the relocation of many industries to the peripheries. And it coincided with the spread of basic social services and recreational amenities.

***Policies to integrate slums into cities have worked where institutions and infrastructure were adequate.*** After World

War II, Sweden urbanized rapidly and Stockholm's population grew swiftly, from 741,000 in 1950 to 1.39 million in 1980.<sup>41</sup> Stockholm had an inadequate and dilapidated housing stock, while rents were high relative to most other European cities.<sup>42</sup> In reaction, the Swedish government formed the Royal Housing Commission in 1945. A plan was formulated to demolish slums in Stockholm and other cities, and re-house the displaced slum dwellers in publicly provided rental housing in well-designed high-rise buildings on the city's periphery. The first generation of high-rise residential buildings was integrated with the provision of schools, health clinics, and recreational and shopping facilities, as well as service centers. Spatial connectivity to city centers was ensured through easy access to transport.<sup>43</sup>

Swedish authorities managed to continually upgrade urban living conditions throughout the 1960s and 1970s. With the Million Homes Programme the government set itself the aim of ending innercity squalor and overcrowding by building 100,000 new dwellings a year from 1965 to 1974, adding one-third to Sweden's aggregate housing stock of 3 million units.<sup>44</sup> The new settlements provided basic amenities, including schools and clinics, and were linked to urban employment centers through well-planned traffic systems.<sup>45</sup>

Similar lessons come from the United States. By the end of the nineteenth century, American philanthropists had raised awareness of the hardships facing slum dwellers. They urged building regulations to ensure minimum standards in the construction of new tenements.<sup>46</sup> But it was not until the 1930s that the government became active in the provision of housing.<sup>47</sup> Following the Great Depression, the United States Housing Authority was established by the Wagner-Steagall Housing Act of 1937, which allowed for subsidized loans to be made to local housing authorities for clearing dilapidated areas and building replacement homes. A sound legal framework enabled national and state authorities, civil society organizations, and private developers to deal concertedly with slums. Good intra-urban public transport systems connected

the new housing developments to the local city economies. As infrastructure improved even more, particularly after the passage of the Housing and Urban Development Act 1965, the more prosperous residents left the city centers for the suburbs.<sup>48</sup>

Better connective infrastructure is a precondition for applying targeted policies to deal with slum housing. This takes time, but both Hong Kong, China, and Singapore show that it can be done over decades rather than centuries. Regardless of differences in the speed, the sequencing of policies appears to be the same: targeted policies to integrate slums cannot come before the application of geographically blind and connective policies (see box 7.7).

#### **BOX 7.7** *Speeded up, but still in sequence: spatial integration in twentieth-century Hong Kong, China*

Before World War II, Hong Kong, China, developed its administrative structure and legislative framework to govern land markets. In 1935, mounting awareness of poor living conditions in urban slums led to the formation of a Housing Commission. This was followed by the Town Planning Ordinance of 1939, which established a Town Planning Board.

Nevertheless, the proper implementation of the ordinance and town planning in Hong Kong, China, had to wait until after the passage of the Town Planning Regulation in 1954. It was only after the famous Shek Kip Mei slum fire of 1953 that efforts to develop public housing programs went into full swing. In 1965 the Working Party on Slum Clearance was formed. It took Hong Kong, China (a city in a hurry), more than 30 years before it began effectively addressing the problem through spatially targeted interventions. Hong Kong, China, first had to develop and strengthen the spatially blind institutions governing the operation of land and housing markets, and connective infrastructure to improve the use of land.

The first land use strategy and zoning plan—the “Colony Outline Plan and Outline Zoning Plans”—were only drawn up in 1963. The

spatially blind institutions had to be adapted over time as the city developed and the urbanization progressed. The 1939 Ordinance was amended in 1958, 1969, and 1974.<sup>a</sup> Having established the necessary planning framework, Hong Kong, China, was better placed to implement spatially connective policies in the 1970s. These policies were a necessary response to the doubling of car registration within a decade and the concomitant increase in congestion that was a product of the city's rapid economic growth of around 10 percent a year.

Institutions and infrastructure went hand in hand. With effective planning laws in place, the government was able to introduce the Temporary Restriction of Building Development Ordinance of 1973 in the Pok Fu Lam and Mid-Levels areas of Hong Kong, China. This in turn paved the way for building the Mass Transit Railway, modifying building height restrictions in the area around the Kai Tak Airport, and accelerating relief for an overloaded transport network.

The result: the city now ranks among the world's top five in infrastructure efficiency, and the slums are gone.<sup>b</sup>

Source: WDR 2009 team.

a. Bristow 1984. b. Cullinane 2002.

***Targeted interventions may have to wait until institutions and infrastructure have been improved.*** The experience of developed countries remains relevant today. Costa Rica, South Africa, and Singapore show why.

During the 1980s, the combination of rapid in situ population growth, migration, and an influx of refugees from war-torn neighboring countries made Costa Rica's already acute urban housing shortage even worse. This led to the creation of a National Housing Finance System in 1986. The aim was to provide subsidies to low-income households for house purchases or construction. Households were able to supplement the funds that they received with loans from private institutions, including commercial banks, savings and loans institutions, and cooperatives. Minimum wage households were entitled to a full subsidy, while households earning more than four times the minimum had access to smaller subsidies and loans at near-market conditions.<sup>49</sup>

Costa Rica's housing subsidy succeeded because the necessary spatially blind institutions and spatially connective infrastructure were in place to facilitate its targeted interventions. As early as 1869 the government decreed that primary education was a basic universal right. The 1949 constitution guaranteed free access to secondary education as well. Costa Rica's government invests more than 20 percent of its budget in education each year, and has a literacy rate of about 95 percent to show for it. Similar investment in the public medical system reduced infant mortality rates, with an average life expectancy at birth of 79 years.<sup>50</sup> Although incomes are much higher in Costa Rica's central regions, social indicators are similar across the country.<sup>51</sup>

Costa Rica has well-functioning institutions governing the land market. An effective property registry system is in place. Indeed, more than 80 percent of property owners possess registered titles, and there is a high degree of legal security.<sup>52</sup> The capital city, San José, is linked with the major provincial cities by an efficient and affordable bus system, and private bus companies connect San José and its outlying suburbs. In many ways, Costa Rica is a model for other developing countries.

South Africa's experience is more sobering. When the first post-apartheid South African government came to power in 1994, it faced a housing crisis with an estimated deficit of 1.5 million housing units and an additional requirement of 170,000 new units a year. Some 18 percent of households, or 7.4 million people, lived in slums.<sup>53</sup> The new housing policy that emerged from multiparty negotiations was implemented through the Housing Act of 1997, providing housing-related subsidies to as many people as possible for renting, purchasing, constructing, and improving homes.

But the requisite institutions and connective infrastructure were not yet in place. A range of reforms—including changes to regional government boundaries, financial support mechanisms, and housing-related legislation—were introduced simultaneously. Indeed, the Housing Act repealed, incorporated, or amended 35 separate pieces of legislation.<sup>54</sup> The first wave of low-cost housing developments, on the peripheries of major cities, lacked basic amenities and transport links to city (and job) centers. These developments failed to ameliorate intraurban divisions. Recent shifts in policy are more encouraging. The Breaking New Ground national housing program has focused on integrating low-income communities through improvements in access to public transportation and basic social and commercial services.<sup>55</sup>

Improving institutions and infrastructure and intervening at the same time is a tall order for any government, but Singapore shows it can be done (see box 7.8). Perhaps the most successful example of how slums can be eradicated, Singapore is to some extent an anomaly. It is one of the few countries that have managed to implement all three sets of integration policies simultaneously. Singapore was successful because it had exceptionally rapid economic growth and a focused government in power since 1965. The fact that it is a city-state helped greatly, indirectly providing a general lesson: successful urbanization takes coordinated action at all levels of government.

Most countries will not be able to replicate Singapore's efforts—aligning priorities and the effort of central, state, and city



governments is difficult for any country that is not a city-state. More likely, they will have to sequence their policy efforts along the path followed by Costa Rica and earlier developers such as Great Britain, Sweden, and the United States. South Africa shows the difficulties of trying to implement all three sets of policies simultaneously.

*“An I for a D”—a policy instrument for each dimension of urbanization’s challenge*

The sequence of policies corresponds to different levels of urbanization. Incipient urbanization requires mainly the application of spatially blind policies. Intermediate urbanization requires the addition of spatially connective policies. And advanced urbanization requires these and spatially targeted efforts. So the success of the new policy is predicated on the successful implementation of the ones introduced before it.

For a predominantly rural country whose urban share is less than a quarter or so, the portfolio of places is faced with what might be termed a one-dimensional challenge—to facilitate density (see table 7.1). It is not obvious where this density will increase first, and governments are best advised to allow market forces to play themselves out. *Neutrality* between places is the rule, and its urbanization strategy should consist mainly of spatially blind institutions. They include the provision of basic and social services, the establishment of market institutions and law and order, the security of property rights, the efficient operation of the land market, and sound macroeconomic policies. Regulations must be versatile enough to facilitate efficient land use conversion, and standards for building must be enforceable without being overly restrictive. This is a tall order for governments in countries at the low levels of income with which low urbanization rates are associated. They should not make it harder by attempting spatially explicit policies.

For a rapidly urbanizing country with urban shares between one fourth and three fourths, managing its portfolio of places is mainly a two-dimensional challenge—to build density and reduce distance to density. A two-dimensional challenge requires

**BOX 7.8** *Singapore: from slums to world city*

At independence in 1965, 70 percent of Singapore’s households lived in badly overcrowded conditions, and a third of its people squatted on the city fringes. Unemployment averaged 14 percent, GDP per capita was less than \$2,700, and half of the population was illiterate. Falling mortality rates and migration from the Malay Peninsula implied rapid population growth, further increasing the pressure on both housing and employment: 600,000 additional units of housing were needed, and private supply was less than 60,000. An account of this time comes from a contemporary visitor to Singapore:<sup>a</sup>

The undercover walkways are usually taken over by hawker stalls and junk. Laundry hangs from poles thrust out of windows above—just like in old Shanghai. This is Singapore, in the early 1970s. We were all devastated at the time—who didn’t live here. From 1871 to 1931 the city’s Chinese population rose from 100,000 to 500,000. By 1960 it is estimated that more than 500,000 Chinese were living in slum-like conditions—indoors. Equipped with only one kitchen and one bathroom, the shophouses were designed for two extended families at most. After extensive partitioning many of them housed up to 50 individuals.

Today, less than 40 years later, Singapore’s slums are gone. In their place is one of the cleanest and most welcoming cities in the world. The secret? First, institutional reforms made the government known for its accountability. Then, the gov-

ernment became a major provider of infrastructure and services. The scarcity of land made good planning an imperative. Multiyear plans were produced, implemented, and updated. Finally, the housing authority (HDB) was mandated to undertake a massive program of slum clearance, housing construction, and urban renewal. Public housing has been an integral part of all development plans. At the height of the program, HDB was building a new flat every eight minutes. Of Singapore’s population, 86 percent now lives in publicly built units. Most own their flats, encouraged by special housing funds financed from the Employees Provident Fund, a mandatory retirement scheme. Serviced land was made available. Through the Land Amalgamation act, the government acquired almost one-third of city land. Slum dwellers were relocated to public housing.

For a city-state in a poor region, it is not an exaggeration to assert that effective urbanization was responsible for delivering growth rates that averaged 8 percent a year throughout the 1970s and 1980s. It required a combination of market institutions and social service provision, strategic investment in infrastructure, and improved housing for slum dwellers.

Sources: Yuen 2004, Yusuf and Nabeshima 2006. a. Cockrem 2007.

a two-pronged response: continuing the task of building spatially blind institutions, and investing in spatially connective infrastructure to offset the congestion that might otherwise offset the *efficiency* gains from “localization economies” (see chapter 4).

For a highly urbanized country with urban shares above 75 percent, urbanization should emphasize *livability*, creativity, and urban social integration—the delivery of “urbanization economies.” These countries face a three-dimensional challenge—to build density, reduce distance, and diminish divisions. To be sure, these countries have

**Table 7.1 An instrument per dimension—a simple framework for urbanization policies**

	Area		
	Incipient urbanization	Intermediate urbanization	Advanced urbanization
Urban shares	Less than 25 percent	About 50 percent	More than 75 percent
Examples	Kampong Speu, Cambodia; Lindi, Tanzania	Chengdu, China; Hyderabad, India	Greater Cairo, the Arab Republic of Egypt; Rio de Janeiro, Brazil
Dimensions of policy challenge	1-D: Build density	2-D: Build density, reduce distance	3-D: Build density, reduce distance, eliminate division
Instruments for integration			
Institutions	Land rights; basic education, health and water and sanitation	Land use regulations; universal provision of basic and social services	Land use regulation and land taxation; universal provision of basic services
Infrastructure		Transport infrastructure	Transport infrastructure; demand management
Interventions			Slum area development; targeted programs to reduce crime and environmental degradation

Source: WDR 2009 team.

a varied economic geography: their portfolio of places consists of a handful of one-dimensional areas, a good proportion face two-dimensional challenges, and some face three-dimensional challenges. Spatially blind and connective policies continue to facilitate agglomeration economies, but now they also are prerequisites for successful interventions to reduce within-city divisions.

### The framework in action

Low-density areas should build economic density through rural-urban transformations and stronger links between villages and towns. Rapidly urbanizing areas should ensure that the productivity gains from economic density are not offset by congestion costs. Highly urbanized areas should focus on livability by promoting social integration and the gains from economic concentration. The priorities at the national level correspond with the predominance of one or more of these types of areas.

#### *Incipient urbanizers (one-dimensional areas): institutions for more efficient rural-urban transformations*

The recent developers show that success does not require explicitly spatial policies to lay the groundwork for successful urbanization. For areas of incipient urbanization, the policy priorities remain the provision of basic social services and the improvement of land markets.

**Emphasize social services.** In 1960 the Republic of Korea had a GDP per capita

level roughly the same as Benin, Cambodia, or Tajikistan. Since then it has transformed itself into a leading industrial country.<sup>56</sup> Consistent with the stylized facts of chapter 1, the Republic of Korea's sectoral transformation has been accompanied by an equally radical spatial transformation. In 1960 about 75 percent of all Korean citizens lived in rural areas. By 1990 the country was 75 percent urban, and today the urban share of the population exceeds 80 percent.<sup>57</sup>

Institutions to ensure the universal availability of basic social services helped the nation lay the foundations of rapid and successful urbanization. In 1960 the proportion of the overall population age 15 and over with no schooling was 36 percent, and by 1980, when it had entered the intermediate urbanization stage, this proportion had fallen to less than 15 percent. By 2000, some years after it entered the advanced stage, the proportion was less than 5 percent. The years of schooling of the average member of the labor force had increased from five years in 1960 to nine years in 1980, rising to more than 12 years by 2000.<sup>58</sup> A similar story unfolded for health-related services. In 1980 only 4 percent of children were immunized against measles. By 1989, 95 percent were. In 2006 only one child in every 100 was not immunized.

Matching the universal provision of education and health services has been the nationwide flexibility in land use conversion.<sup>59</sup> In particular, the Republic of Korea's government has been willing to convert agricultural land for industrial purposes. The central

government also encouraged local governments to promote the conversion of agricultural land through the formation of smaller, more localized industrial complexes.

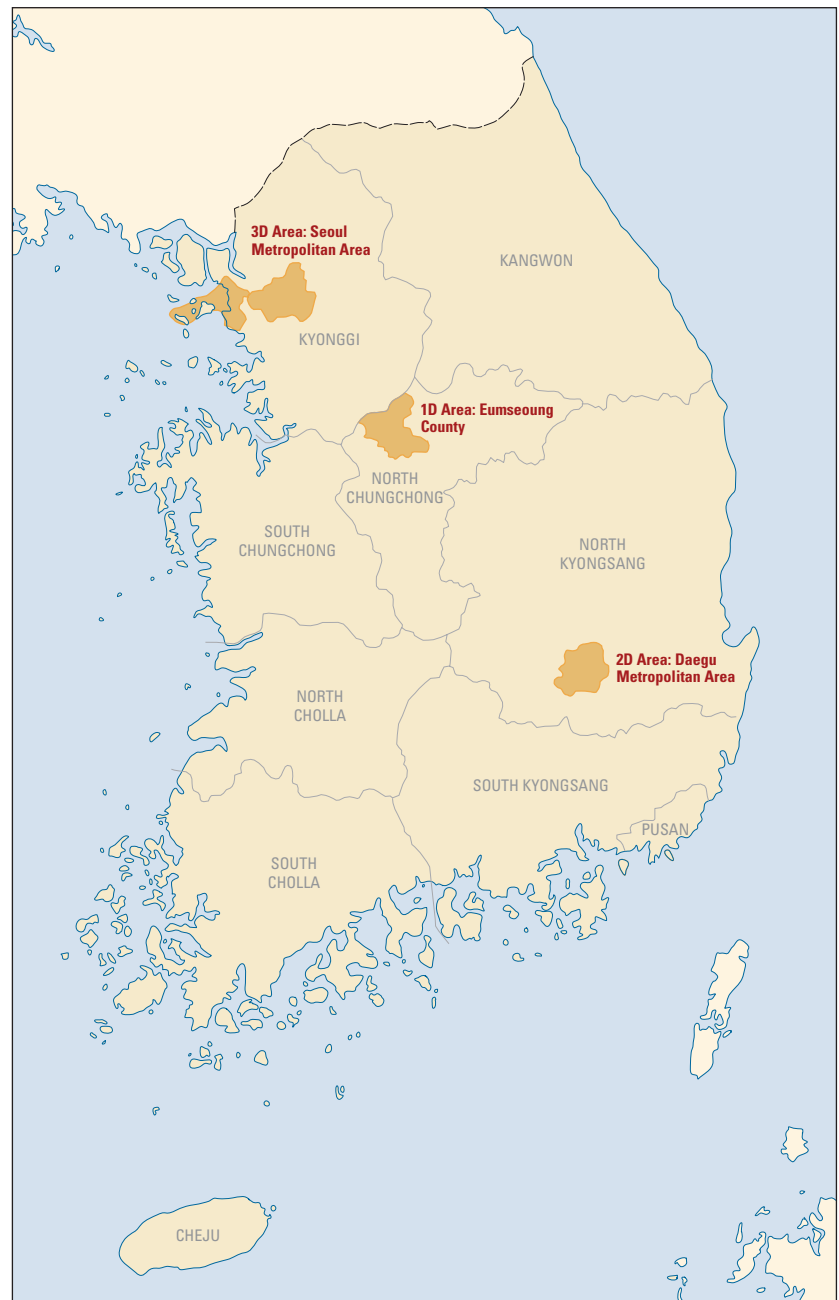
While some areas have inevitably been left behind in the Republic of Korea's urbanization process, none has been left disadvantaged. Take Eumseong county, a largely rural area in Chungcheongbukdo province (see map 7.1). As the Republic of Korea industrialized and urbanized, the county experienced a continual outflow of people. In 1968 the population exceeded 120,000, but by 1990 it had fallen to just under 75,000. But even as the people of Eumseong were seeing their neighbors move closer to Korea's major cities, they got better education and health services and improved streets and sanitation. Between 1969 and 1990, middle and high school teachers tripled in Eumseong county from 1,000 to around 3,000. And the number of hospitals per million population in Chungcheongbukdo province doubled from around 400 in 1980 to 800 in 1990, while the water supply coverage increased from less than 30 percent to almost 60 percent. People left Eumseong, but the Korean government did not abandon the county—instead, it continued to emphasize the universal provision of basic and social services.

The Republic of Korea is not the only successful economy to provide evidence of the framework in action. Over the last two decades, China has been gradually putting in place the institutions to improve its urbanization processes. An urban land market has been created, and regulations standardizing the assignment of land use rights have been established.<sup>60</sup> In the 1980s the urban planning law was aimed at controlling the size of large cities, but the 10th Five-Year Plan (2001–05) instead chose to emphasize the synergistic development of China's large, medium, and small cities. The household registration system, which for years had imposed restrictions on rural migrants looking to move to urban areas, has been reformed, and the 11th Five-Year Plan (2006–10) aims to further strengthen land market institutions.

Against this backdrop the urbanization prospects of China's one-dimensional areas have improved. Take Guizhou province. In southwest China, and home to almost 40 million people, Guizhou lags far behind the

coastal provinces (see map 7.2). Its GDP per capita in 2005 was only 34 percent of the Chinese average,<sup>61</sup> with almost 75 percent of its population classified as rural. The challenge Guizhou faces is building density to facilitate agglomeration economies. Its 11th Five-Year Plan (2006–10) aims to deliver an urban share of 35 percent by focusing on the area's largest city, Guiyang. With the improvements in spatially blind institutions in China, this

**Map 7.1 The Republic of Korea—three areas at different stages of urbanization**



Source: WDR 2009 team.

Map 7.2 China—three areas at different stages of urbanization



Source: WDR 2009 team.

appears to be more realistic now than would have been the case two decades ago.

**Define and enforce land rights.** Kampong Speu province in Cambodia, about 100 kilometers southwest of Phnom Penh, covers about 7,000 squares kilometers. It has about 700,000 people, and is 10 percent urban. A few market towns serve its farming communes of Mohasaing, Ou, Traeng Trayeung, and others. Many villages are beneficiaries of the land registration and titling begun in 2000. The aims are to strengthen land tenure security and land markets, formulate policies for land administration and management, develop mechanisms for dispute resolution, and establish a national land registration

system. The results are more security of tenure—leading to easier transactions, higher land values, and more land investments—and greater mobility to urban areas.

Kampong Speu illustrates the critical issues for areas of incipient urbanizers. Spatially blind policies to encourage rural-urban integration should be the mainstay of a government's strategy: improve land markets and property rights, improve rural and urban social services, and encourage inclusive governance in towns and small cities (box 7.9 discusses the importance of land titling in Cambodia and Vietnam).

Secure tenure promotes greater investment in land and shelter, improves the ability to transfer land, and enhances access to credit. China, Pakistan, and Vietnam confirm its importance for investment in low-density areas. Farmers use more labor and inputs on owned plots than on leased land. They also use land as collateral for new activities and benefit from increases in land prices. In India the prices for titled land are, on average, 15 percent higher than those for untitled land. In the Philippines secure housing commands prices 58 percent higher than housing without title, and in Jakarta prices for secure housing are 73 percent higher.<sup>62</sup>

Despite these obvious advantages, more than 50 percent of the periurban population in Africa and more than 40 percent in Asia lives under informal tenure. In many countries improving land tenure (and registration) is hindered by political and customary tenure arrangements. In Africa, where customary institutions cover between 90 and 98 percent of the land, policies to formalize land tenure must start with customary systems and gradually add features of modern land registration. Once community-recognized rights are obtained in Benin, Ghana, Mozambique, and Namibia, individuals can apply for land certification and full registration, and both can be used for credit.

**Improve land administration.** Central Asia and Eastern Europe have the most systematic experience in tackling land administration, from Central European countries with old traditions of land markets, to Central Asian countries where no land markets existed. During the transition from plan to market, countries tried to reestablish equity in land and property rights, deepen land



### BOX 7.9 *Titling land for a sustainable rural-urban transformation*

#### **“Application receipts” in Cambodia**

Cambodia is formalizing ownership of land through the distribution of land titles, with immediate benefits in higher productivity and land values.<sup>a</sup> Although the courts and other formal institutions to resolve land conflicts are slow, formal land rights documents carry authority in most rural communities. If landholders hold a formal title to a disputed plot of land, their position is considerably strengthened, even if the conflict is resolved through informal means.

In 1989 individual land use in agriculture was codified by law.<sup>b</sup> Rural residents were encouraged to submit applications for land ownership certificates, and applications came in for 4 million plots. Due to the limited administrative capacity and reach of the government, only about half a million titles were actually distributed.<sup>c</sup> But people who applied got an “application receipt,” and this document often worked as a formal title.<sup>d</sup>

This view was backed by the 1992 land law, which ruled that an application receipt is a valid claim on the plot. In 2004 the government initiated a comprehensive land management and administration program, and one of its central components includes a systematic titling scheme. By the end of 2005 about 457,000 plots had been registered under this program, and 166,000 titles had been distributed.<sup>e</sup>

#### **“Red books” in Vietnam**

In 1981 Vietnam moved to a system similar to the Chinese “household responsibility system,” with land users entitled to keep surplus production above a fixed quota. In 1988 some individual property rights to agricultural land were transferred to farmer households. In the 1993 land law, the distribution of land use certificates—known as “red books”—was mandated. Red books come with the rights to sell, rent, mortgage, and bequeath land. So the idea of a land market was formally sanctioned.

Red books increase land market activities, and these activities increase agricultural productivity by transferring land to the most productive users, reducing inefficiencies.<sup>f</sup> The liberalization of the land market has been followed by increased mobility as households sell land to take up new economic opportunities in the wage labor sector.<sup>g</sup> So a more fluid land market has facilitated the ongoing shift in Vietnam from a predominantly agricultural economy to a more diversified and urbanized economy. It is a big part of a strategy that has yielded perhaps the most impressive poverty reduction in any country in recent history.<sup>h</sup>

Contributed by Thomas Markusen.

a. Markusen forthcoming; World Bank 2003b.

b. Boreak 2000.

c. Sophal, Saravi, and Acharya 2001.

d. Sovannarith and others 2001.

e. Deutsch 2006.

f. Deininger and Jin 2003; Ravallion and van de Walle 2006b.

g. Ravallion and van de Walle 2006a.

h. World Bank 2003b.

and capital markets, and improve public functions such as land taxation, planning, and asset management. Now they have to improve mechanisms to enable registrations, valuations, and transactions (see box 7.10).

Instituting mechanisms to govern land use and conversion can be difficult. Some nations fear that land conversion would hurt grain production and food security (China and the Arab Republic of Egypt). Many others are constrained by traditional forms of land tenure, such as the communal systems in Africa and the *ejido* in Mexico. In cases of unclear property title, land conversion tends to benefit the state and the developers at the cost of the farmers or rural households that traditionally held or cultivated this land.

In Mexico the traditional communal land system has evolved to enable land transactions. After the 1917 revolution, Mexico distributed more than 100 million hectares, or 50 percent of its arable area, from large farms to *ejidos*, rural communities organized along the precolonial indigenous social structures. But the redistribution undermined property rights, and the requirement that land be used for self-cultivation precluded rental markets.

### BOX 7.10 *Land markets in transition*

In the first phase, Eastern Europe and Central Asia restored property rights, privatized state-owned assets, and promoted equity in housing. Next, they rebuilt the land administration systems for *cadastre* and registration followed. Proper records were needed to stimulate real estate markets and take care of land allocation and consolidation. Information infrastructure, institutional capacity, and databases were the areas of focus. Now some are entering the third phase of collecting property taxes, managing public land, and issuing building permits.

Some lessons:

- Reforming dysfunctional legal and institutional systems such as those in Latin America, may be more difficult than starting anew (the Kyrgyz Republic, Georgia).
- A single agency should be responsible for both registration and

*cadastres*. More efficient, a combined system is easier to make self-financing.

- A local champion is needed, preferably not a surveyor or a lawyer. Enthusiastic change managers were instrumental in Moldova and the Czech Republic. Competent officials in the Russian Federation, Serbia, and Turkey were needed to design and implement the new systems. Systematic registration was not necessary because good land records predated socialism, and there were few transactions during the socialist period.
- A solid system with Web-based applications to reduce user transaction costs and the opportunities for corruption can be updated on its own.

Contributed by Cora Shaw and Gavin P. Adlington.



In 1991 the system gave more freedom to *ejidos* to sell and rent land. Of 150,000 hectares used for urban development between 1995 and 2000, more than two-thirds were from *ejidos*. The off-farm income of the farmers increased 45 percent. (Box 7.11 presents promising examples.)

**Intermediate urbanization  
(two-dimensional areas): institutions  
and infrastructure for increasing  
density and reducing congestion**

Rapidly urbanizing areas expect a continuing influx of migrants and increasing

congestion. The priorities include providing social services for rural and urban residents, ensuring fluid land markets, and investing in infrastructure in and around the growing city centers.

**Expand administrative jurisdictions to coordinate infrastructure investments.** Among the many cities that have absorbed rural Koreans are Seoul and Daegu. Both of these cities were initially able to urbanize against a backdrop of spatially blind policies, but they soon began to face congestion, which required spatially connective policies. Indeed, housing congestion in Seoul became

**BOX 7.11** *Strengthening land market institutions for rural-urban integration*

**Land management on Douala's urban fringe—Cameroon's Mbanga-Japoma Project**

Mbanga-Japoma, a land development project in Douala, Cameroon, provides serviced land at a reasonable price and reconciles formal and customary development practices. The first phase, covering 160 hectares 30 kilometers from the city center, started as a partnership among public institutions, formal private investors, and customary owners. The partnership develops the site with primary and secondary infrastructure services (roads, water, sewerage, drainage, electricity), delineating blocks of land of between 1 and 8 hectares. The developer gives back 45 percent of the land to customary landowners, keeping 55 percent. Blocks are then subdivided and sold, either by the developer or by customary owners. The final cost of a serviced plot is much lower than one provided by the formal private sector.

Although there are questions about eligibility for purchasing the serviced plots, the approach provides a new perspective for partnerships in managing rural-urban land use in and near Sub-Saharan cities.

**Secondary land rights and farming in central Mali**

Secondary land rights—including sharecropping, tenancy, and borrowing land under customary tenure—are often seen as exploitative because they do not give permanent tenure to users. But in some circumstances they can benefit both secondary and permanent rights holders. In the village of Baguinéda, in central Mali,

secondary rights allow small-scale farmers to hire migrant workers in exchange for temporary rights to cultivate plots. The system is highly structured, with specific days of the week designated for laborers and others who are working on the borrowed land. Land tenure in the village is almost exclusively under the customary system, controlled by the village council, allowing for secondary rights allocations. Strong demand from nearby urban markets for horticultural produce makes cultivating of even a small plot profitable and thus attractive to migrants.

**Inclusive administration—the Republic of Korea's integrated cities**

The Republic of Korea developed the rural-urban integrated city to overcome the shortcomings of earlier rural development initiatives. The integrated city policy incorporates rural counties with cities in a unified spatial framework. It aims to improve local public services and local administration and reduce rural-urban disparities.

Starting in 1994 the government selected 49 cities and 43 counties as candidates. The selection criteria included historical homogeneity, natural topographical conditions, and the potential for balanced development within the integrated city. The selected cities and counties held public hearings and citizen surveys. After this screening, 41 cities and 39 counties were amalgamated into 40 rural-urban integrated cities.

Attitude surveys suggest that residents and local councils see the benefits. Everyone agrees that the integrated city makes

for better land use planning in urban areas. Areas for improvement include the equity of service provision, since rural and urban residents have different needs, and the weak rural voice, since urbanites are believed to be more organized.

**Land consolidation in Indonesia**

The Land Consolidation Program implemented in Indonesia in the 1990s shows how to facilitate the orderly development of fast-growing areas and to plan the development of vacant areas on the urban fringe.

The mayor has the authority to determine the location of consolidation areas and to manage and supervise the process. But the key actors are the private landowners and the occupiers of (state-owned) land.

The minimum requirement for land consolidation is to have at least 85 percent of landowners representing at least 85 percent of the land area give their agreement. All participants contribute by providing land for infrastructure and services. The amount of land a participant is required to give up is determined by consensus. Small landowners who cannot contribute land can contribute money or labor. The contributions fund infrastructure and utilities—and build a pool of “cost-equivalent land,” to be used only by small landowners to enlarge their parcels.

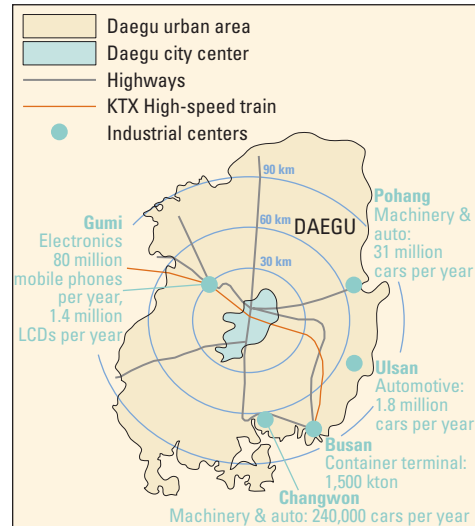
Sources: WDR 2009 team; Groupe Recherche/Actions pour le Développement 2001; and Kim 1998.

a severe problem in 1960 as the area grew through the intermediate stage of urbanization and absorbed a large influx of people from abroad after the country gained independence from Japan and from rural areas in the Republic of Korea. To help tackle this problem, the area of Gangnam, south of the Han River, was absorbed into Seoul's territory in 1963, and the Gangnam Development Program initiated. This program involved a series of spatially connective infrastructure projects spread over 30 years, including several bridges across the Han River and a 54.2-kilometer circular subway line to link Gangnam with central Seoul.

Daegu's story is similar. Between 1950 and 1990, Daegu's population swelled by a factor of six, from 355,000 to nearly 2 million,<sup>63</sup> as its thriving textile industry pulled in rural migrants seeking a better life. The policy response was to integrate Daegu and its hinterland by expanding its administrative zone in 1987 and again in 1995, followed by building a subway system and expanding the city bus system. The city also experienced continual building and upgrading of local roads. In 1980 just over 40 percent of Daegu's local roads were paved, and by 1995, virtually all had been paved.

Combining universal access to the most basic services and reasonable land markets with investments to improve spatial connectivity with other areas of the country, Daegu has thrived. Manufacturing has deconcentrated from Daegu into the surrounding Gyeongsangbukdo province, and the local economy has diversified, reducing its reliance on the textile industry and moving into sectors with higher value added production. Daegu now sits at the center of a vibrant urban system surrounded by five cities, all with easy transport access to the central city, and each having evolved to provide localization economies (see map 7.3). Gumi has been dubbed "Korea's Silicon Valley" for its specialization in electronics, while coastal Pohang and Ulsan, respectively, provide homes for the Pohang Steel Company and Hyundai. Ulsan also houses one of the biggest shipbuilding industries in the world, and both these cities have been on the

**Map 7.3 Decentralization and localization economies in Daegu**



Source: Daegu Metropolitan City.

forefront of the Republic Korea's export-led industrialization.

Other examples are Chongqing and Chengdu, both rapidly urbanizing areas in southwestern China. In line with an unabashedly urbanization-based economic growth strategy, China is piloting the "area approach" in western China. At about 43 percent, they have similar urban shares to the average for China. The objective is to increase those shares to 70 percent in 2020, but in a manner that speeds the concentration of economic activities while reducing rural-urban disparities in living standards. The mainstays of the strategy are institutions and infrastructure (see box 5 in the overview).

If markets favor the two places as much as the central and provincial governments have, the two cities will improve the lives of millions in the Chinese hinterland. The initiatives have already had a local impact. In Chongqing rural incomes in the first half of 2007 increased faster than those of urban residents. Foreign investment is about the same as it was in Shanghai a decade ago. Industries are attracted to the low wages and low cost of land. According to government statistics, average wages, at \$2 to \$3 a day, are much lower than those in Beijing

or Shanghai. In Chengdu farmer concentrations are believed to have increased productivity by 80 percent. Industrialization has been absorbing about 100,000 farmers a year, with some narrowing of rural-urban income differences.

Several areas at the intermediate stage of urbanization in China appear to conform to the principle of an additional instrument for the dimensional challenge of congestion. An example is the tri-city area in the northeast of Hunan province, in central China (see map 7.4). The cluster of three cities—Changsha, Zhuzhou, and Xiangtan—has a combined population of around 13 million and accounts for about one-fifth of the province. With an income exceeding the national average by 17 percent and the Hunan average by 61 percent, this cluster is an intermediate urbanization area with an urban share of half.

An area plan—the first of its kind in inland China—was formulated in 2005.<sup>64</sup> The plan specifies a regulatory land use planning framework within which market prices will be allowed to allocate land for different uses. It also provides planning guidelines including, for example, enforcing land use rights and promoting land

intensification in central city areas. The plan sets out a series of spatially connective policies aiming to promote connectivity between the three cities in the cluster. These include highway and rail-based expressway projects to connect Xiangtan with Zhuzhou and ring roads around each of the three cities. The plan is a good illustration of how the principle of “an *I* for a *D*” can be made operational using an area approach.

**Invest in transport connectivity while continuing institutional reform.** Developed metropolitan areas rarely leave city growth unplanned. Land and housing markets help allocate residential and office space. Rapidly expanding systems need clear property rights to provide incentives for land transactions and correct land valuation to avoid an urban bias and too much migration to the city. Singapore develops land and housing plans every 10 years and lets the market function once public and private sectors agree on which economic activities to develop and which residential patterns are needed to accommodate firms and workers.

Urban transport, along with urban land management, determines the shape of the city and its ecological footprint. Urban mobility is particularly important for the poor. In Buenos Aires 87 percent of the jobs in the metropolitan area are accessible in 45 minutes. In Mexico City 20 percent of workers spend more than three hours traveling to and from work each day. The urban poor in Beijing and Shanghai spend less than 5 percent of their income on transport because they walk or cycle. If they chose to travel by bus, the costs would be 40 percent of their income.<sup>65</sup> Brazil’s *vale de transporte* is an effective way to subsidize poor workers in the absence of good urban transport—financed by the central government and by the employer in equal parts. Several large cities have public transport networks that are used extensively—metro in Delhi, Kolkata, and Mumbai, buses and metro in São Paulo—but the network quickly becomes inadequate and congested because of the rapid population growth. Regular maintenance and new investments in infrastructure are needed to sustain density in urban areas (see box 7.12).

**Map 7.4** Changsha, Zhuzhou, and Xiangtan—spatially connective infrastructure in a two dimensional area



Source: China Urban Planning and Design Institute and Hunan Development and Reform Commission 2005.

Note: The main artery is formed by the Beijing-Guangzhou railway, Beijing-Zhuhai highway, and State Highway 107.

**Put infrastructure in the most promising places.** Several countries have created new cities to move a capital city (Brasília), to decongest the capital (Seoul), or for economic reasons. Creating new cities with the sole purpose of diverting population from the capital is often risky, evidenced by Brazil, France, República Bolivariana de Venezuela, the United Kingdom, and more recently Egypt and Nigeria.<sup>66</sup> New cities become attractive to private investors only after they reach a threshold, but there is no way to know that threshold.<sup>67</sup> And when cities are created far from main transport networks and business centers, they are unlikely to be economic successes.

When markets identify promising cities, strategic investments in infrastructure and public goods can accelerate their potential for economic growth (see box 7.13). Secondary cities that promote access to markets, improve city management, and build human capital seem a better alternative. And if political concerns dictate the creation of new cities, efficiency concerns will guide locations to be close to growing markets and to have access to infrastructure. Working with existing cities is preferable to creating new cities from scratch. But, if new cities are created, they should be constructed on an appropriate scale, close to markets, and planned to generate demand-side links.

**Advanced urbanizers  
(three-dimensional areas):  
institutions and infrastructure for  
higher density and shorter distance,  
and targeted incentives to  
address divisions**

Successful metropolitan areas in both developed and developing countries have well-functioning land markets, representative management, state-of-the-art transport infrastructure, and social policies to integrate low-income residents.

**Use an inclusive mix of institutions, infrastructure, and incentives.** Colombia's capital, Bogotá, shows the resolve and resources needed for inclusive urbanization in a metropolitan region. Although the area's income places it in upper-middle-income levels, 43 percent of its population of 6.7 million is considered poor. One

**BOX 7.12** *Retrofitting transport infrastructure in Bangkok*

In the 1990s it was estimated that the average car in Bangkok spent 44 days each year stationary in traffic. How did this situation come to pass? And how is it being remedied?

A city of around 7 million people, Bangkok is the product of hundreds of years of incremental growth along traditional land configurations. The result is a city woven with narrow lanes, many of them culs-de-sac (called *soi*), but with few arterial roads. Indeed, the arterial roads can be as far as 7 kilometers or more apart. According to a recent estimate, roads account for only about 6.1 percent of Bangkok's land area in the inner city, and only 1.7 percent in its peripheral areas. In high-income countries it is usual for 20 to 30 percent of urban land area to be devoted to roads. Even with this extreme congestion, economic activity has been slow to decentralize to other cities in

Thailand, or to suburban districts of Bangkok, because of the enduring attraction of Bangkok's agglomeration economies, sociocultural amenities, and key export infrastructure, including its port.

In recent years several flyovers and elevated expressways have been built, along with an elevated railway system (Skytrain), dedicated bus lanes, and two peripheral ring roads. But car ownership has shot up, too, adding to the traffic and diminishing the impact of remedial investments. Looking to the future, congestion pricing and increased parking fees appear to be promising policy options. Reducing fares on the Skytrain and extending rapid transit to more of Bangkok, perhaps using bus rapid transit, pose greater challenges.

Contributed by Austin Kilroy.  
Sources: Angel 2008, Bae and Suthirarnart 2003, and Gakenheimer 1999.

of 12 residents lives in a slum, and about one-third of new citizens in recent years are rural migrants. The city has taken steps to make urbanization inclusive. It built better schools, renewed parks, started community centers, and improved main networks for water and sanitation. Since 2000 a public-private bus rapid transit system, the *TransMilenio*, has improved citywide accessibility. Travel times have fallen by an average of 15 minutes, with larger reductions for households in poorer parts of the city (see map 7.5). Aided by these infrastructure improvements, Bogotá's internationally recognized *Programa de Mejoramiento Integral de Barrios* has assisted the poorest neighborhoods to integrate with the city. Begun in 2003 it has already helped 930,000 people. The program is believed to have contributed increases of up to 11 percent in house values.<sup>68</sup>

The Republic of Korea also provides lessons. In the 1950s it had an estimated 136,650 unregistered slum districts, more than 2,200 in the core of Seoul.<sup>69</sup> Spatially targeted policies to redevelop Seoul's slum areas started as early as the mid-1960s.

### BOX 7.13 *New cities: escapes from urban jungles, or cathedrals in the desert?*

New cities were attempted in Europe without much success. In the United Kingdom the Barlow Commission Report of 1940 stimulated interest in new towns. Between 1947 and 1968, Britain created 26 new towns to control the growth of London and stimulate development in Scotland and Wales. In 1965 France followed a similar program—nine towns, five in the Paris area and four in lagging areas, were constructed. These programs soon were interrupted and put aside as unsustainable. The new towns never reached their targeted population, nor did they forestall the growth of London or Paris. The experience in developing countries has been mixed.

#### **Failure in the Arab Republic of Egypt**

Egypt's program of new cities is the world's largest. In 20 years Egypt has built 20 new cities and is preparing for 45 more. The first set of 24 cities was launched in 1974–75 as a manifestation of the political commitment to conquer the desert and ensure sustainable growth. Large industrial zones were created and generous tax incentives were given to the private sector. Land was virtually free. The "first generation" of new towns included six towns, each with its own industrial base and large target populations.<sup>a</sup> Ten years later—by the mid-1980s—the next program based on satellite settlements was launched, and nine second-generation settlements were launched around Greater Cairo. A third generation included twin towns close to provincial capitals, such as New Thebes.

The performance of the six cities created 30 years ago suggests a mixed

record at best. Cities closer to Cairo have attracted businesses and people, though much fewer than anticipated. Cities distant from Cairo (including Sadat City, supposedly the new capital) remain unattractive for skilled labor due to lack of amenities and transport links. The new cities have no more than 1 million inhabitants (1 percent of Egypt's population), compared with the 5 million target set for 2005. The program was also costly: 22 percent of the Ministry of Infrastructure's investment under the Fourth Plan (1997–2001) was spent in these new towns. This will increase if the government continues its policy of developing the urban fringes. The emphasis on attracting investment was not balanced by the need to make cities attractive for skilled labor and accessible from the established urban centers. Eventually, the creation of the new cities had little impact on decongesting greater Cairo.

#### **Success in China**

China's approach recognizes the need to create cities with access to major markets and transportation networks. Shenzhen was the first special economic zone (SEZ) to be approved by Deng Xiaoping in 1980. From a small town with 30,000 inhabitants, it grew to 800,000 in 1988 and 7 million in 2000. The new residents include the best-trained professionals in the country, attracted by high salaries, better housing, and education opportunities for their children. GDP per capita increased more than 60 times.

Shenzhen owes its success to its nearness to Hong Kong, China; its connected-

ness within the area and with other cities in China; and its urban form:

- *Access to foreign markets.* Locating the SEZ close to the city of Hong Kong, China, facilitated foreign investment, technical assistance, and access to foreign markets.
- *Connectedness within the area.* To spread the fruits of development, the boundaries of the municipality were expanded to extend the benefits of the city to all workers. The rural *hukou* was abolished in the municipality, and all urban services became accessible to all residents. Placing the Shenzhen city-area in the Pearl River Delta area ensured the best possible links to its hinterland and other urban nodes in the Delta regions. Complementary decisions to ease the mobility and integration include investments in transport infrastructure and a shift from a road-based to a rail-based system.
- *Functional urban form.* The comprehensive plan for Shenzhen envisions a polycentric metropolis that connects the SEZ to urban nodes through efficient transport.

Sources: WDR 2009 team; Stewart 1996; and World Bank 2007k.

a. For example, Sixth of October had an original target population of 500,000, which was raised in the late 1980s to 1 million, and currently the target is 2.5 million. The actual population is probably less than 200,000.

But without the requisite investments in spatially blind institutions and spatially connective infrastructure in place, these policies succeeded only in relocating the slums to new slum areas such as Mokdang, Nangok, and Shillim near the Guro Industrial Complex, whose textile and other industries provided low-skill employment opportunities for rural migrants.

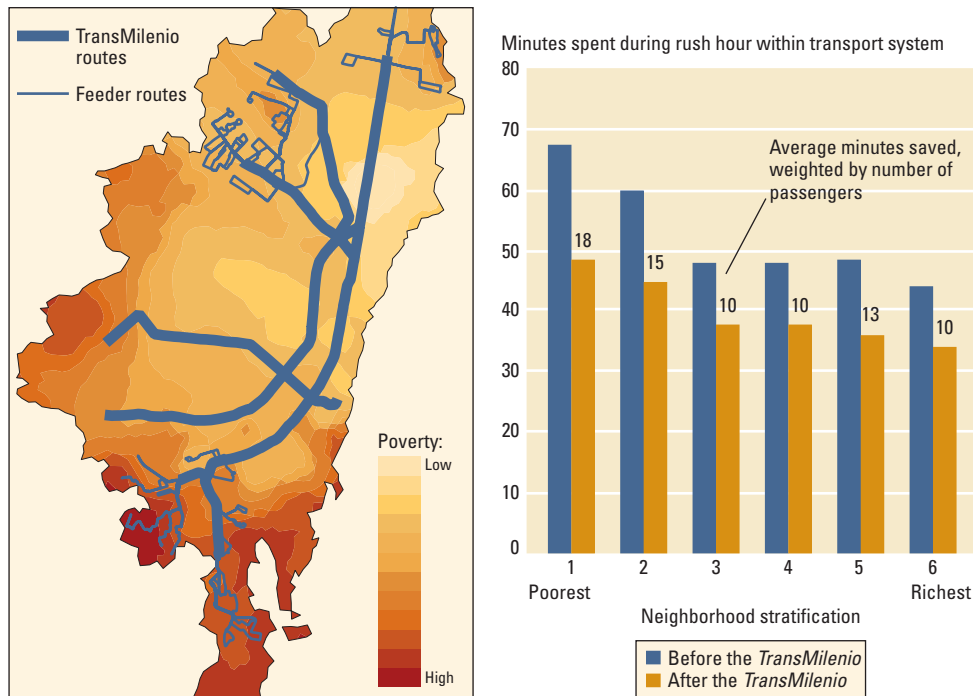
The Republic of Korea's government would have more luck when it tried again with an expanded set of policies in the 1980s. By this time, the Republic of Korea

was closing in on the advanced stage of urbanization, and Seoul's population level had started to stabilize (see map 7.6). Furthermore, enough time had elapsed for the earlier spatially blind and connective policies to take full effect.

Between 1984 and 1990, expanding road capacity struggled to keep up with the growth of vehicle ownership. More extensive plans of city-periphery integration were required, and in 1989 the New City Development plan was launched. Five new cities were encouraged around 25–30 kilometers



**Map 7.5 Bogotá's TransMilenio has helped to integrate the poor**



Source: Yepes 2008.

from Seoul. Central to the success of this integration were investments in connective infrastructure. The subway system was extended, and a beltway was constructed, easing traffic congestion.

During this period, 93 slum districts covering an area of 427 square kilometers were modernized, including the Wolgoksa-dong and Mok-dong slum areas.<sup>70</sup> Dwellers in the former benefited from successful in situ upgrading; those in the latter were relocated as the government cleared the area and replaced it with a modern apartment complex. Squatters benefited from moving subsidies of about \$2,000 per person and the right to purchase a new apartment at a discount.<sup>71</sup>

Turkey has also transformed itself from a predominantly rural society to a primarily urban one over the past half-century. Since becoming a member of the Organisation for Economic Co-operation and Development (OECD) in 1961, Turkey's urban share increased from around one-third to two-thirds,<sup>72</sup> as GDP per capita more than tripled to about \$6,600.<sup>73</sup> Driving this increase in density was the rapid growth of Turkey's cities, foremost among them, Istanbul.

In 1960 Istanbul's population was about 1.5 million, a modern-day Kansas City in the United States. With a population more than 10 million today, Istanbul is now one of Europe's largest cities, about the same

**Map 7.6 Economic density in Seoul with good connections to other cities**



Source: WDR 2009 team and World Bank Development Research Group, based on subnational GDP estimates for 2005. See also Nordhaus 2006.

size as Chicago.<sup>74</sup> Much of this growth has been accommodated on the Asian side of the city, home to successive waves of rural immigrants. It is now the origin of a daily tidal wave of commuters who make their way across the Bosphorus to work on the European side of the city.

Underpinning Turkey's transformation to an urban economy are the spatially blind reforms that accompanied the creation of the modern republic of Turkey. The Turkish constitution of 1924 included the adaptation of European laws to the needs of the new republic, endorsing private property rights. The reforms introduced under Mustafa Kemal Atatürk unified the country's education system, providing the backdrop for better access to education over the last half-century. In 1960 the proportion of the adult population more than 15 years old with no schooling was 67 percent, and in 2000, 18.6 percent.<sup>75</sup> And better health care services helped increase life expectancy from 51 years in 1960 to 71 years in 2005.<sup>76</sup>

The reforms of the 1920s helped to lay the foundation for Istanbul's rapid expansion, but the city has found itself grappling with congestion. In response, the city has improved its connective infrastructure, with 1973 marking the opening of the eight-lane Bosphorus Bridge connecting the European and Asian parts of the city. This was followed, in 1988, by the completion of the second Bosphorus Bridge. In 1989 the first light metro rail line opened between the areas of Aksaray and Kartaltepe. Meanwhile, a second light metro line opened in 2007, supplementing the 2005 construction of an 11-kilometer metrobus line. More are in the pipeline.

With this prosperity has come division. Much of Istanbul's rapid growth over the last several decades has occurred through the growth of informal settlements, such as Sultanbeyli, Sarıgazi, and Paşaköy on the Asian side. These settlements formed as rural migrants took advantage of an ancient legal precept, which survived the Atatürk reforms: no matter who owns the land, if people are able to get their houses built overnight and are moved in by morning, they cannot be evicted without being taken to court. Such settlements, called *gecekondu*, house a large share of Istanbul's

population. Almost half of the city's residents—some 5–6 million people—live in dwellings that are or were *gecekondu*. Although settlements such as Sultanbeyli have integrated themselves into the city, others like Paşaköy have not.<sup>77</sup> Istanbul still needs targeted programs to deal with the divisions associated with the continuing existence of poorly serviced and under-integrated informal communities.<sup>78</sup>

China's Pearl River Delta faces similar challenges. The area consists of nine cities and has a population roughly equal to that of Spain, representing one of China's most advanced urban agglomerations. With an urban share of almost 75 percent in 2006, it is a three-dimensional area with the triple challenge of building density, reducing distance, and overcoming divisions. The divisions are manifest in "urban villages," many of which would be known as slums elsewhere. They lack access to basic sanitation services and are subject to environmental degradation. The cities of the Pearl River Delta area have been introducing spatially targeted policies to deal with urban villages. Guangdong province, where the area is located, began rebuilding urban villages in June 2000. The city of Zhuhai, for example, aims to rebuild 26 administrative villages. An incentive scheme allows the village administration, residents, and developers to share any land appreciation.

Rural-urban integration has been part of post-1978 liberalization in China. Under the township model, the urban core has responsibility for the surrounding rural hinterland. As the city grows and its area of influence expands, the administrative borders of the township also expand. Large cities promote the active inclusion of their surrounding hinterland by financing investment in infrastructure and social services in the small cities and rural areas under their influence (see box 7.14).

**Get regulations right.** Shanghai, a metropolitan area with special status as a province, has a population of 13 million registered and 4 million permanent residents, spread out over 6,300 square kilometers. The urban share is almost 80 percent, with 18 urban districts and the Chongming rural county. Urban land markets function well

in allocating the urban land available under the rural land conversion limits. Floor-area ratios have adapted to changing market needs and increased the space per person from 3 to 12 square meters over the past 20 years. Land leases are a source of revenue.

Shanghai's built-up area has expanded from 300 to 500 square kilometers in the past decade. Passengers on the metro have increased tenfold, from 178,000 to 1.6 million over the past decade, but its share of all trips is just 2.5 percent. Many of the 4 million transient workers in Shanghai live in old urban villages, affordable because they are not subject to regulations for density, height, and public space. Given the difficulties in converting rural land, these urban villages are attractive to developers, but developing them would likely make the housing conditions worse for transient workers.

Less encouraging is Mumbai. Between the 1970s and 1990s, the city resisted the influx of migrants by instituting land use and building regulations that favored incumbents and prevented efficient use of land.<sup>79</sup> The result has been an evenly spread development, but with congested streets and the proliferation of slums.

**Integrate slums into cities, using all three instruments—institutions, infrastructure, and incentives.** Cities without slums is not a realistic vision for developing countries, as recognized in the midterm appraisal of India's 10th Five-Year plan:

There has, over the years, been a paradigm shift in government's slum policy prescriptions. Originally, a "slum free cities" policy was prescribed. However, looking at the social dimensions of the whole problem and the various economic activities carried out by the slum dwellers, this concept has given way to rehabilitation of slum dwellers. The rehabilitation involves either relocation or in-situ development of the slum areas. In the initial years of slum development, the focus was on provision of infrastructure in slums through the National Slum Development Program (NSDP) and now there is renewed stress on provision of shelter to urban slum dwellers through the Valmiki Ambedkar Awas Yojana (VAMBAY).<sup>80</sup>

Identifying and implementing policies for managing slum formation is a major concern for policy makers in most

### BOX 7.14 *Rural-urban integration in Beijing, Guangzhou, and Shanghai*

Beijing, Guangzhou, and Shanghai—all thriving areas—have plans to link rural and urban areas: to provide education and health services, invest in infrastructure and transport networks, and construct townships.

- *Social services.* The governments provide vocational training and other services to support non-agricultural employment and help farmers transition from agriculture to nonagriculture. They also offer incentives for firms that will train people and recruit the trainees after training. And they provide social services such as medical insurance and pensions to rural residents. Beijing subsidized rural cooperative medical insurance. Shanghai increased public spending on rural social services, including education and health to cover farmers (100 percent covered by a rural collective medical insurance plan). Guangzhou will establish a pension scheme to cover all the local residents.
- *Infrastructure investments.* In 2005 Beijing built 304 kilometers of roads and linked all administrative villages. In Shanghai expressways were extended from 200 kilo-

meters in 2003 to 550 kilometers in 2005, and will be extended again to 750 kilometers in 2010. In Guangzhou the provision of roads, electricity, and water to all rural settlements with more than 100 residents was completed in 2007.

- *Integrating surrounding areas.* The three cities have encouraged traditional industries to move from the central business district (where rents are quite high) to the periphery (using fiscal incentives) and allow high value-added industry to move in to the core area. A township construction program was launched to have a city system centered on an inner city of 10 million inhabitants, surrounded by secondary cities, central towns, and villages. In 2003 Guangzhou initiated the building of 10 central towns financed by the city government. Shanghai has begun implementing the "1966 plan," which by 2020 aims to have one main city, nine secondary cities (traditional historical centers), 60 new townships, and 600 central villages with 1,500–3,000 residents each.

Source: WDR 2009 team.

developing countries. But there is little consensus on the choice of policies required to improve living conditions and livelihoods of slum dwellers, while not compromising the economic potential of metropolitan areas. Two questions have to be answered. When should slums be improved? And what should be done to develop slums? This Report proposes that the right time to systematically address the problem of slums is when the institutional and infrastructure requirements are in place. And the correct approach is integration of slums into the broader urban economy.

If the problem is crime and squalor, the better strategy would be to upgrade the neighborhood. But if the problem is spatial inefficiency, steps to improve land use efficiency and compensate slum dwellers

for disruptions to their livelihoods probably should take precedence. Interventions to improve living conditions in slums include prevention measures, such as sites and services programs and remedial schemes (with slum upgrading being the most common), packages of basic services, paving, shelter, and social integration. The Kampong Improvement Program in Indonesia is probably the oldest, largest, and best-known urban-upgrading initiative in the world. It combines low investment costs of \$23 to \$118 per person, benefits 15 million people, and uses a participatory approach. The Orangi Project in Pakistan and the Accra District Rehabilitation Project in Ghana are also promising (see table 7.2). But the experiences all show that spatially focused interventions for

improving slums are unlikely to be enough for social integration, unless accompanied by infrastructure, institutions, and complementary reform (see box 7.15).

Land use and zoning policies have often excluded the poor from being physically integrated into dynamic labor markets, while deficient transport infrastructure lowers the possibility of connecting distant residents to urban jobs. South African zoning policies under apartheid segregated white and black people in cities. City structure can exacerbate social divisions and hinder efforts to reduce inequality and discrimination. The abolition of apartheid was not enough to reduce the disparities. To offset spatial income inequalities, local governments can subsidize transport costs of poor

**Table 7.2 Interventions to integrate the urban poor**

Country (city)	Focus and objectives	Key features and lessons
<i>Tunisia (National)</i> Agence de Rehabilitation et de Renovation Urbaine	<i>Tenure security.</i> Regularizes tenure, provides infrastructure, house improvement support, plots for displaced households.	Triggered dynamic process of housing improvement; helped explain low proportion of urban population in slums.
<i>Brazil (Goiania)</i> The Goiania Federation for Tenants and Posseiros	<i>Tenure security.</i> Public land occupied and tenure secured by appealing to rights of citizens to occupy unused and untitled land.	Covers 100,000 former tenants. Local grassroots organization successfully supported efforts to get tenure security and access to infrastructure and services.
<i>Peru (Ilo)</i> Municipal Government	<i>Land provision.</i> Makes serviced plots available for construction by low-income households.	6,000 lots serviced for housing by 2005. Despite a fivefold increase in local population in 1960–2000, no pressure for land invasions.
<i>Argentina (Buenos Aires, San Fernando, and San Jorge)</i> IIED-America Latina	<i>Land provision.</i> Serviced land donated to facilitate resettlement and density reduction; plots allocated in community-managed lottery.	Program is the result of a series of actions and initiatives over the past 20 years, supported by an Argentine NGO that lobbies provincial and municipal authorities.
<i>Namibia (Windhoek)</i> Shack Dwellers Federation of Namibia and City Government	<i>Flexible zoning laws.</i> Group purchases and leases of land with communal services; plot sizes below official national minimum.	Demonstrates how constraints in the form of urban land use standards and regulations can be overcome to make serviced sites more affordable to low-income households.
<i>Malawi (Lilongwe, Blantyre, Mzuzu)</i> Malawi Homeless People's Federation	<i>Land provision; flexible regulation.</i> Lobbied government for land; demonstrated capacity of members to build good quality housing at low cost. Changing official standards important for cost.	Since 2003, approximately 760 plots for housing have been provided and housing construction loans made available to savings groups; slum accommodation containment and land use improvement.
<i>Pakistan (Orangi)</i> Research and Training Institute	<i>Amenities provision.</i> Community development of drainage and sewerage systems, financed by local communities and government.	96,994 households in Orangi and 300 locations in Pakistan. All costs can be covered by eliminating contractors and modifying engineering standards.
<i>15 countries (South Asia, East Asia, and Africa)</i> Slum Dwellers International	<i>Amenities provision.</i> National federations formed by slum dwellers; initiatives to build and improve homes and basic services.	Savings groups (mostly women) and their collective management of money allow groups to increase capacity for cooperative action; negotiation of partnerships with governments.
<i>Thailand (National)</i> Community Organizations Development Institute	<i>Amenities provision.</i> Infrastructure subsidies and housing loans to community organizations formed by low-income slum households.	495 projects in 957 communities covering 52,776 households. Activities identified by each community organization in partnership with local actors; funding sources include community contributions.
<i>Nicaragua (National)</i> Local Development Program (PRODEL)	<i>Amenities provision.</i> Cofinance small infrastructure projects (water, sanitation, drainage); house improvement and microenterprise loans and support.	484 projects benefiting some 60,000 households. Funds provided to local governments, NGOs, community organizations, and households.

Source: Satterthwaite 2008, for this Report.

Note: IIED = International Institute for Environment and Development; NGO = nongovernmental organization.



children, provide private-school vouchers, and increase public-school spending.<sup>81</sup>

### A strategy for inclusive urbanization

The Tinbergen principle proposes that one policy instrument is needed to address each policy objective.<sup>82</sup> Applying the principle to the policy issues addressed in this Report implies that as many integration instruments are needed as there are dimensions to a problem. As the integration challenges increase with the stage of urbanization, the number of policy instruments required increases as well. Fortunately for developing nations, the capacity of markets and governments grows as they urbanize. But these policies must be introduced in the right sequence.

The foundations for an inclusive urbanization have to be instituted early in the development process. To do this, governments must be selective. This chapter suggests how they can prioritize and sequence:

- In areas of incipient urbanization, the objective should be to facilitate a natural rural-urban transformation. The core policy instruments are spatially blind institutions that facilitate density in some locations. These instruments include secure land tenure and property rights, basic and social services, and macroeconomic policies that do not favor one productive activity (large industry) over another (small agriculture). Policy makers should aim for neutrality between rural and urban areas.
- In areas of intermediate urbanization, the rapid growth of some cities creates congestion. In addition to spatially blind policies to facilitate density, connective policies to tackle congestion and economic distance become necessary. They include investments in transport infrastructure (to enhance connectivity both within and between cities) and encouragement of socially efficient location decisions by firms.

#### BOX 7.15 *Slum upgrading and prevention: what works?*

Evidence from policy experience compiled by UN-HABITAT and the Cities Alliance shows that successful initiatives share several attributes. Among them, institutional strengthening and coordination across government levels seem to be the most important.

**Stronger institutions.** Countries that have been successful in integrating slums into their cities have strengthened their institutions and carried out complementary reforms, which include a broader urban poverty reduction agenda (Indonesia, Islamic Republic of Iran, Mexico, South Africa, and Turkey). Some have implemented policies to integrate the urban poor into the legal and social fabric of cities (Brazil, Chile, and Colombia), others have carried out reforms in land and housing provision (India).

**Coordination across government levels and with private agents.** Countries that performed well also made an effort to coordinate among central, regional, and local authorities and the private sector (Chile, Egypt, Sri Lanka, Thailand, and Tunisia). But cities and countries that were successful in the delivery of basic services and housing improvements had clear

performance monitoring mechanisms that require the involvement of all levels of government. Cambodia, China, and Vietnam, for example, have strict upward accountability regarding municipal implementation on infrastructure. Brazil and Indonesia, on the other hand, have bottom-up performance monitoring, which enhances citizen participation in planning and decision making.<sup>b</sup> Coordination across government levels and with the private sector is also critical for successful scaling up of slum upgrading projects. One example is Indonesia's Kampong Improvement Program, and there are others (for example, Brazil, Colombia, Mexico, South Africa, Thailand, and Tunisia) whose programs began on a modest scale, and were successfully scaled up to the national level because of the involvement of all levels of the government and the private sector.

Based on a contribution by Eduardo López Moreno, chief, Global Urban Observatory, UN-HABITAT.

a. Garau 2008.

b. Bazoglu 2008.

Efficiency should be the watchword of policy makers.

- In areas with advanced urbanization, divisions within cities caused by formal settlements and slums and by grime and crime add to the challenges of density and distance. In addition to spatially blind and spatially connective policies, spatially focused policies for addressing intracity divisions are necessary to target the difficulties of slums, crime, and the environment—and to improve livability.