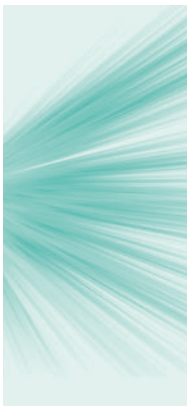

CHAPTER 1
Urbanization and Growth: Setting the Context

Patricia Clarke Annez and Robert M. Buckley

Urbanization and growth go together: no country has ever reached middle-income status without a significant population shift into cities. Urbanization is necessary to sustain (though not necessarily drive) growth in developing countries, and it yields other benefits as well. But it is not painless or always welcomed by policymakers or the general public. Managing urbanization is an important part of nurturing growth; neglecting cities—even in countries in which the level of urbanization is low—can impose heavy costs.

In terms of development and growth theory, urbanization occupies a puzzling position. On the one hand, it is recognized as fundamental to the multidimensional structural transformation that low-income rural societies undergo to modernize and to join the ranks of middle- and high-income countries. Some models, such as Lucas's (2004, 2007), explicitly consider how urbanization affects the growth process (primarily through the enhanced flow of ideas and knowledge attributable to agglomeration in cities. In a more historical treatment, Landes (1969,

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cited in Williamson 1987, p. 6) situates urbanization as an essential ingredient in modernization:

> Industrialization . . . is at the heart of a larger, more complex process often designated as *modernization*. Modernization comprises such developments as urbanization . . . ; the so-called demographic transition; the establishment of an effective, fairly centralized bureaucratic government; the creation of an educational system capable of training and socializing the children of a society . . . ; and of course, the acquisition of the ability and means to use an up-to-date technology.

On the other hand, urbanization is a relatively little-studied area of development economics and policy, as Burgess and Venables (2004, p. 4) note:

> Spatial concentration is most dramatically demonstrated by the role of urbanization, and of mega-cities, in development. . . . despite the massive diseconomies associated with developing country mega-cities, there are even more powerful economies of scale making it worthwhile for firms to locate in these cities. Urbanization is one of the clearest features of the development of manufacturing and service activity in developing countries, yet discussion of urbanization is strangely absent from economic analyses of growth and development.

This volume includes six chapters based on state of the art papers written on topics related to urbanization and growth for the Commission on Growth and Development. To provide context to this rich collection, this chapter begins by examining some basic facts about urbanization and growth, some of them based on the historical experience of today's high-income countries. It then reviews some of the debates that have influenced thinking about the role of urbanization in development. It concludes with a discussion of the institutional, political, and policy challenges that developing countries face as they work through the structural change that urbanization precipitates.

Urbanization and Growth: The Historical Record

Widespread urbanization is a recent phenomenon. In 1900 just 15 percent of the world's population lived in cities. The 20th century transformed this picture, as the pace of urban population growth accelerated very rapidly in about 1950. Sixty years later, it is estimated that half of the world's people lives in cities.

Despite this rapid change, urbanization is not out of control: in terms of population growth rates, the "worst" is over. Urban population growth rates peaked at 3.7 percent a year in 1950–75 and slowed notably thereafter (National Research Council 2003). Nevertheless, given the growing base of people living in cities, annual population increments in absolute numbers are very large—and to many, alarming. UN projections predict that urban populations in developing countries will be growing by more than 65 million people a year between 2000 and 2030 (UN 2006).

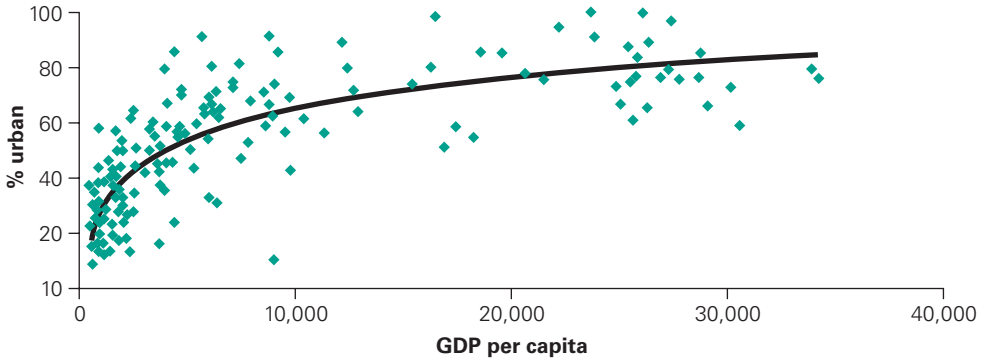
Urbanization has long been viewed with ambivalence. In 1800 Thomas Jefferson wrote to Benjamin Rush: "I view great cities as pestilential to

the morals, the health and the liberties of man. True, they nourish some of the elegant arts; but the useful ones can thrive elsewhere" (Peterson 1984). Twenty years later Percy Bysshe Shelley wrote, "Hell is a city much like London." More recently, Paul Bairoch (1988), the great chronicler of urbanization throughout history, and Bert Hoselitz (1955), the editor of *Economic Development and Cultural Change,* wrote of "parasitic cities" and their ill effects in developing countries. This perspective has often been shared by the popular press. A 2003 *Newsweek* cover story suggested that urbanization in Asia was exploding and potentially a curse. A 2007 UN publication on population reveals deep skepticism about urbanization among policymakers in developing countries: 88 percent of survey respondents from less developed countries reported that the spatial distribution of their population was unsatisfactory. This number declined from 95 percent in 1976, although over the same period the number of countries with policies actively seeking to reduce migration to cities grew, from about 44 percent to 74 percent. The most intense concerns and most activist policies are in the least developed countries (see annex 1).

Arthur Lewis (1977, p. 32) expressed concerns about the costs of urbanization but saw it as unavoidable. "Urbanization would not be inevitable if we could spread industry around the countryside instead of concentrating it in towns, but this is easier said than done. . . . One can work hard at establishing rural industries, but except in police states, this is bound to be limited."

Lewis's sense of inevitability is borne out by experience: very few countries have reached income levels of $10,000 per capita before reaching about 60 percent urbanization (figure 1.1). This relation has changed little since 1960 (see annex 2). This simple bivariate regression explains at least 55 percent of variability across countries, suggesting that urbanization is a very strong indicator of all aspects of productivity growth over the long run, although clearly this simple statistical relation does not establish causality.

Figure 1.1 Urbanization and Per Capita GDP across Countries, 2000 (1996 dollars)



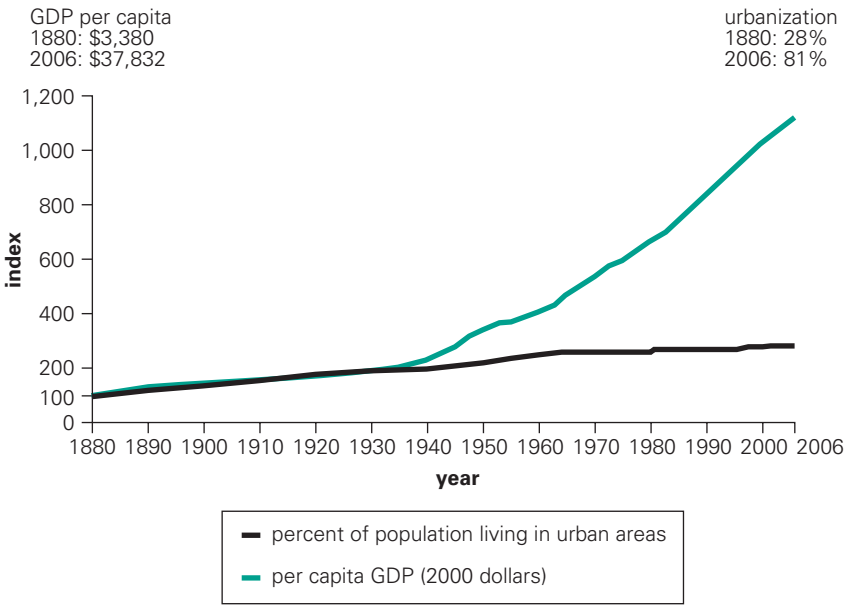
Source: Data on urbanization: World Bank *World Development Indicators* 2005. Data on per capita GDP: Heston, Summers, and Aten n.d.; Penn World Table Version 6.2; Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, real 1996 GDP per capita (chain), September 2006 (http://pwt.econ.upenn.edu/).

The relation between urbanization and income across countries is striking, but it does not shed much light on what countries should expect as they urbanize. Historical data provide some insights into the evolution of urbanization and per capita income over time. In the United States, urbanization rates and per capita income moved together until about 1940, when urbanization reached close to 60 percent; thereafter per capita income expanded much more rapidly (figure 1.2). Presumably, in the initial phases, when urbanization rates and per capita income increase at roughly the same rates, productivity increases reflect shifting resources from lower-productivity rural activities. In later phases rapid productivity gains reflect mainly improvements within industries and services (Romer 1986; Lucas 1988; Quigley 1998).

Rapidly growing developing countries have followed a similar path, although the rapid take-off in per capita incomes in China (figure 1.3) took place at an urbanization rate about half that of the United States. Both urbanization and economic take-off have been much more rapid in China than in India (figures 1.4 and 1.5).

Urbanization is not necessarily accompanied by the rapid and steady growth that China and India experienced. Brazil started on a path similar to that of the United States and China, with a very rapid increase in productivity starting in the late 1960s, when urbanization stood at about 50 percent (figure 1.6). Income growth was not sustained, however,

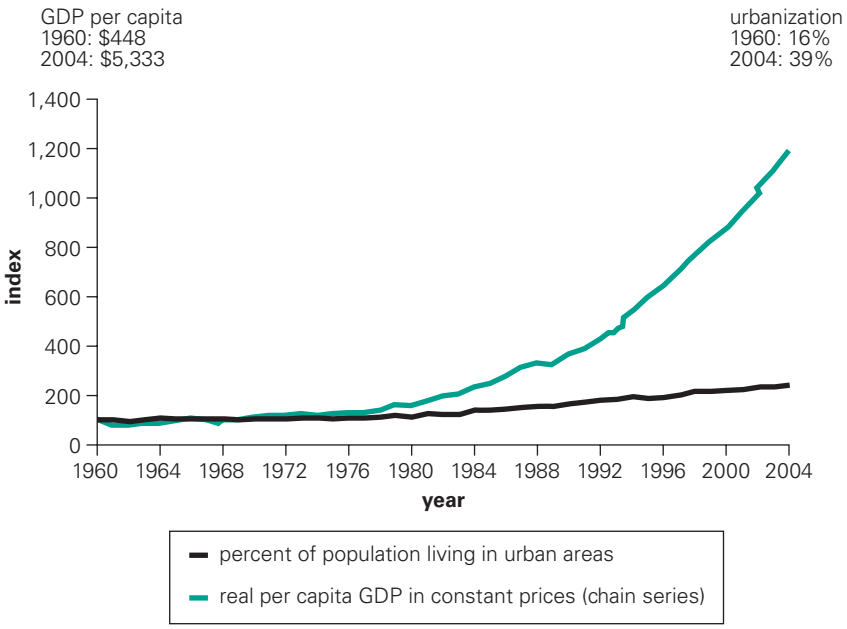
Figure 1.2 Urbanization and Per Capita GDP in the United States, 1880–2006



Source: U.S. Census, http://www.census.gov/population/censusdata/table-4.pdf; Johnston and Williamson (2005). Adapted from Malpezzi and Lin (1999).

Note: Both times series are indexed to 100 in the initial year. The *y* value of each series thus shows the percentage change since that time.

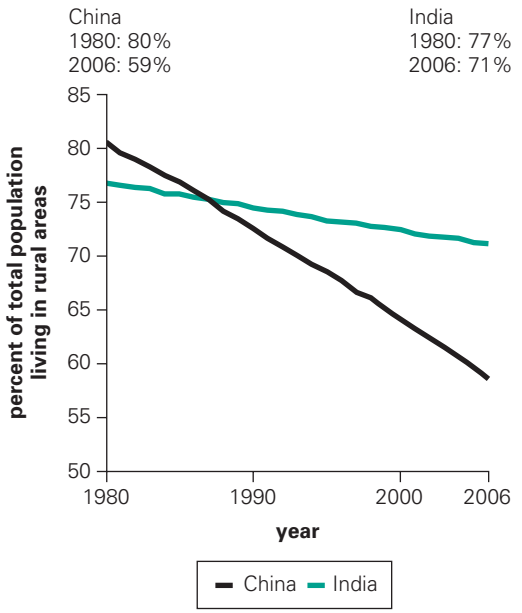
Figure 1.3 Urbanization and Per Capita GDP in China, 1960–2004



Source: See figure 1.1.

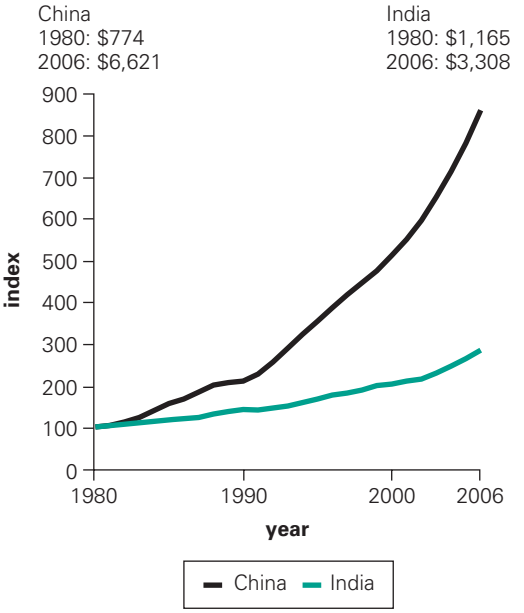
Note: Both times series are indexed to 100 in the initial year. The *y* value of each series thus shows the percentage change since that time.

Figure 1.4 Rural Population in China and India, 1980–2006



Source: See figure 1.1.

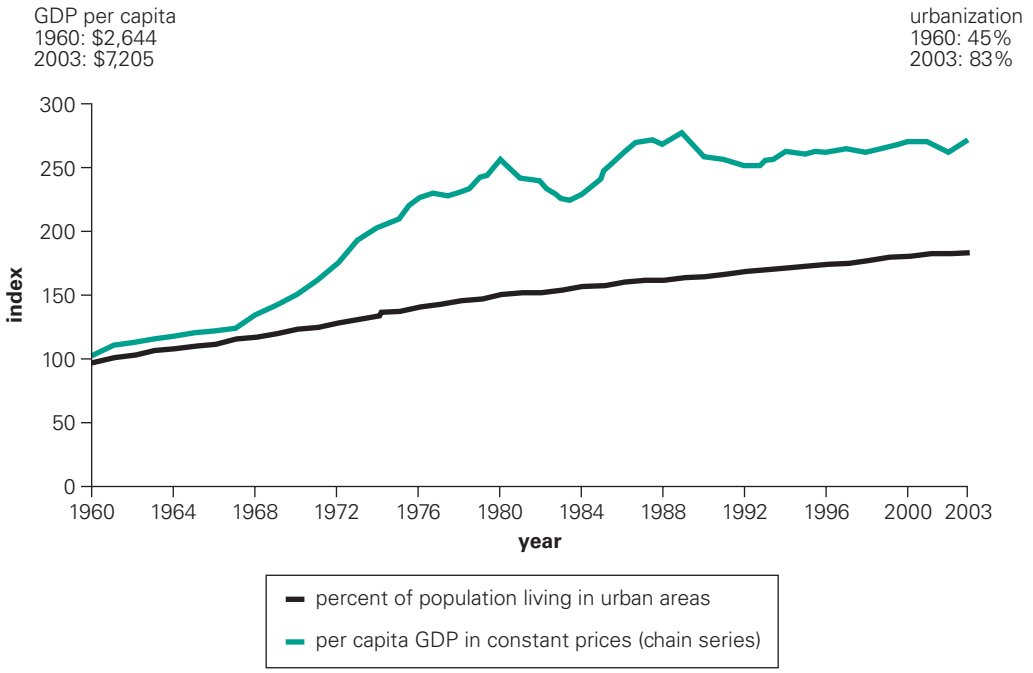
Figure 1.5 Per Capita Income in China and India, 1980–2006



Source: World Bank, World Development Indicators.

Note: Both times series are indexed to 100 in the initial year. The *y* value of each series thus shows the percentage change since that time.

Figure 1.6 Urbanization and Per Capita GDP in Brazil, 1960–2003



Source: See figure 1.1.

Note: Both times series are indexed to 100 in the initial year. The *y* value of each series thus shows the percentage change since that time.

illustrating the fact that urbanization is far from a sufficient condition for continued rapid growth. The structural shift from rural activities to more-productive urban-based industry and services, clearly well advanced in Brazil, is an essential part of modernization. More is needed to drive the later stages of the growth process.

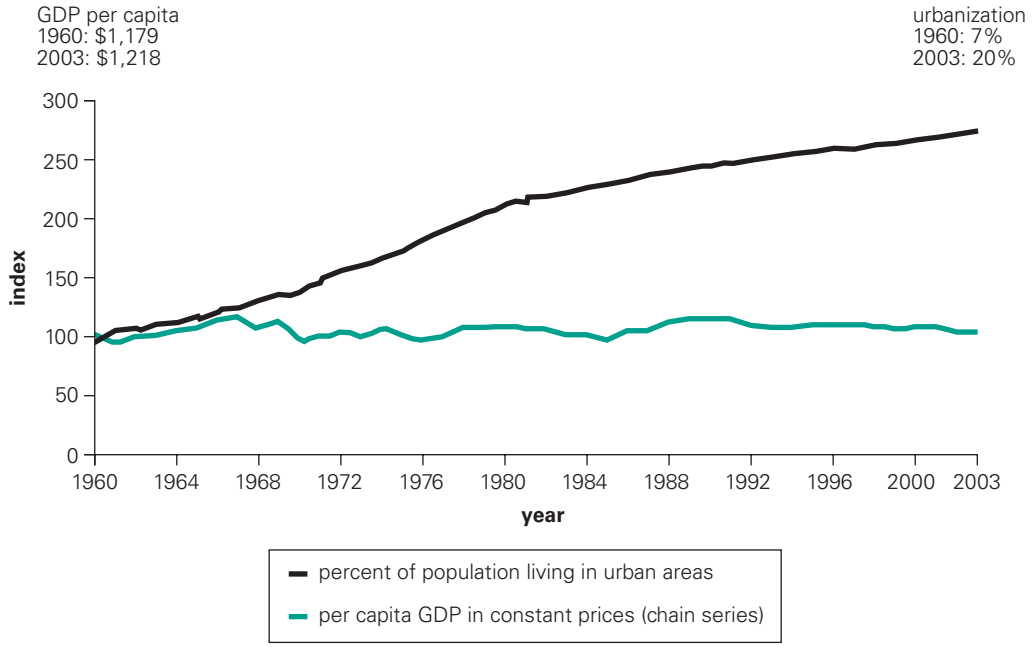
Kenya (figure 1.7) illustrates a different phenomenon: urbanization without growth.[1] The level of urbanization in Kenya in 1960 was extremely low, at just 7 percent. Urbanization proceeded rapidly from this small base, but it still remains low, at about 20 percent. Per capita income has stagnated. Urbanization has clearly not been pulled by productive industrialization in Kenya; other factors are at work. Several countries in Africa have experienced this phenomenon, which is otherwise rare.[2]

Which of these two patterns predominates? How should stagnation in the face of rapid urbanization be interpreted? In 109 countries with

1 Fay and Opal (2000) document this phenomenon in Africa.

2 Weeks (1994) argues that special factors account in part for Africa's rapid rates of urbanization in the immediate postcolonial period. Colonial prohibitions on migration to cities in East Africa—and control of population movements more broadly—were deeply resented. A one-time stock adjustment that may have had little to do with economic factors took place in the early years to compensate.

Figure 1.7 Urbanization and Per Capita GDP in Kenya, 1960–2003



Source: See figure 1.1.

Note: Both times series are indexed to 100 in the initial year. The *y* value of each series thus shows the percentage change since that time.

populations of more than 1 million, both urbanization and per capita income growth rose between 1960 and 2003; in the majority of these countries, income per capita grew more rapidly than urbanization (World Bank 2005; UN 2007). In only 25 countries was income growth negative and outpaced by urbanization. What has come to be termed "pathological urbanization"—substantial structural population shifts without growth—is not common. Moreover, urbanization in these cases tends to reflect problems elsewhere in the economy.

Most of the countries experiencing urbanization without growth are small African countries at low levels of urbanization or failed states. This group of countries figures significantly in the work of Collier (2006, 2007) and Barrios, Bertinelli, and Strobl (2006). Collier offers a number of explanations for the poor growth performance of a range of African countries. Geographic factors—including climate, soils, and the failure to achieve a green revolution—and national boundaries play very significant roles. Barrios, Bertinelli, and Strobl analyze cross-country time-series data to test hypotheses on what drives urbanization. Their global cross-country analysis shows that downward trends in rainfall have a positive and significant effect on urbanization, although this effect is present in Africa only. Slow-growing, rapidly urbanizing countries in Africa may thus be experiencing "push" rather than "pull" urbanization, resulting

from agricultural stress. This diagnosis leads to a rather different set of policy prescriptions than one pointing to pathological urbanization driven by overprivileged cities, articulated in the *World Development Report* 1999/2000 (World Bank 2000, p. 130) as follows:

> National governments have often tried to influence the pace or location of urbanization. Often these efforts consisted of shifting resources from agriculture to finance the expansion of "modern" economic sectors—usually manufacturing—which were concentrated on cities. Urban workers in the formal sector benefited from food and housing subsidies and government-sponsored unemployment and pension schemes, while rural populations received low prices for their crops and had little access to government support. Such misplaced efforts are part of the reason Africa has seen urbanization with very little economic growth.

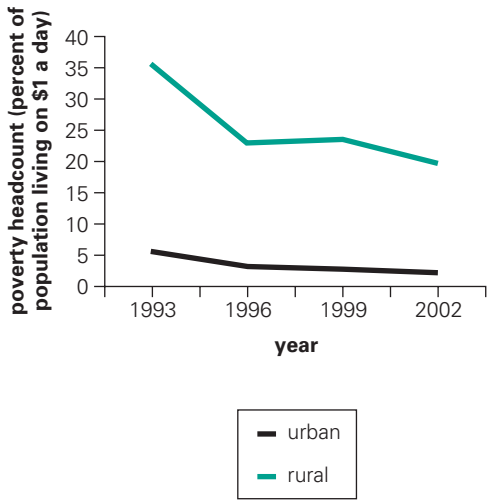
Starving the cities is a futile and damaging response if cities are refuges from stress in the countryside. So, too, is assuming that benign neglect of urban infrastructure will do little harm, particularly when the basic service level in African cities has been deteriorating for more than 25 years (Banerjee and others 2007). The central government often must play a critical role in making the transition to healthy cities and healthy urban finance (box 1.1).

As disturbing as the rare cases of urbanization without growth are, there is little evidence to suggest that even in these cases urbanization exacerbates poverty. In both East Asia and Sub-Saharan Africa, for example—two regions with dramatically different growth experiences—the poverty headcount has declined with urbanization (figures 1.8–1.11). Evidence from East Asia indicates that urbanization with high growth dramatically reduced overall and urban poverty headcounts. In Africa urbanization, accompanied by very low growth, is concentrating poor people in cities rather than the countryside. Even so the poverty headcount has declined somewhat in the process of urbanization. With the exception of Europe and Central Asia—which was highly urbanized for the entire period and experienced an increase in poverty during the depths of the crisis of the late 1990s—other regions display similar patterns (see annex 3).

The sectoral composition of GDP growth across countries confirms a strong link between rapid growth and a structural shift from agriculture to urban activities (manufacturing and services). Examination of the sectoral composition of growth in countries that, over the long term, are growing rapidly enough to converge with the United States in per capita income (that is, growing by more than about 2 percent a year) shows that this linkage is widespread.[3] In every one of these countries, one or both of the urban sectors led the growth process; no country has sustained high growth driven primarily by agriculture. In the subset of "high-growth" countries that experienced average annual GDP growth of at least 7 percent for at least 25 years, as identified by the report by the Commission on Growth

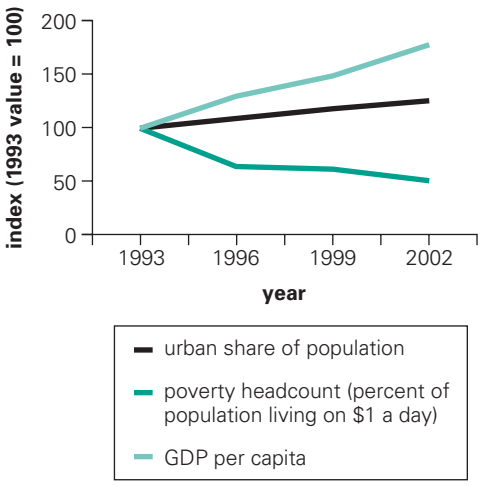
3 Long term is defined here as 20 years or more or for as long as data on the sectoral decomposition of GDP are available in the *World Development Indicators*.

Figure 1.8 Urban and Rural Poverty Headcount in East Asia, 1993–2002



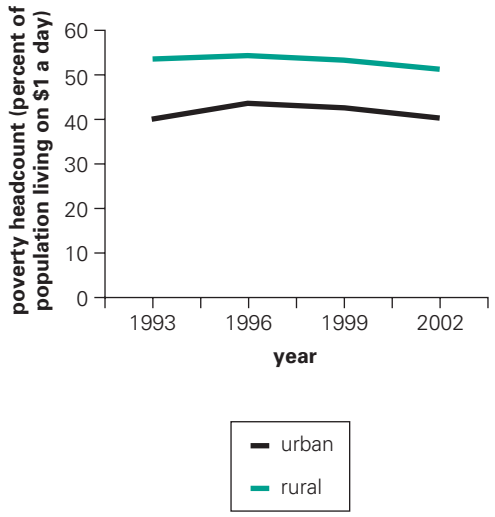
Source: Ravallion, Chen, and Sangraula 2007.

Figure 1.9 Per Capita GDP, Urban Share of Population, and Poverty Headcount in East Asia, 1993–2002



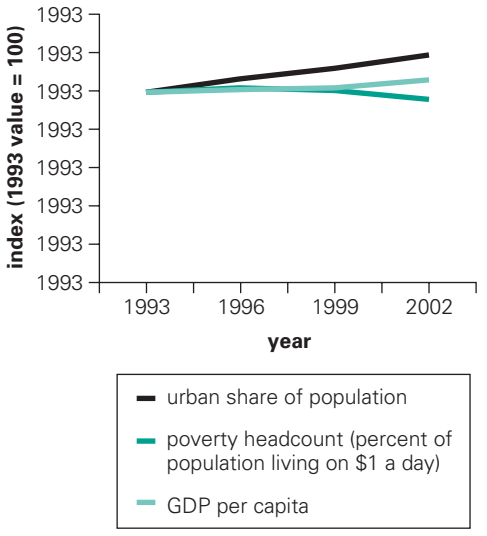
Source: Ravallion, Chen, and Sangraula 2007.

Figure 1.10 Urban and Rural Poverty Headcount in Sub-Saharan Africa, 1993–2002



Source: Ravallion, Chen, and Sangraula 2007.

Figure 1.11 Per Capita GDP, Urban Share of Population, and Poverty Headcount in Sub-Saharan Africa, 1993–2002



Source: Ravallion, Chen, and Sangraula 2007.

and Development (2008), industry and services dramatically outpaced agriculture in all cases (figure 1.12). Across the developing world, the urban sector drives growth: according to the National Research Council (2003), 86 percent of the growth in value-added in developing countries between 1980 and 1998 came from services and manufacturing.

Box 1.1 The Role of Finance in Cleaning Up Britain's "Killer Cities" in the 19th Century

Britain's cities suffered from high mortality rates for most of the 19th century. The causes of and cures for the problems that made cities so lethal were well known[a] and the economic arguments well crafted and debated in Parliament decades before much was done about them. Britain's cities were cleaned up only when the central government stepped in to alleviate the binding financial constraint in cities. In this story lies an important lesson about building urban infrastructure, especially those lumpy discrete investments in networks that expand the limits at which congestion costs outweigh agglomeration benefits. Neither the municipal finance systems that worked before the urban transition nor those suitable for cities in a demographic steady state will necessarily generate finance for investments in local public goods that more than pay for themselves in economic terms.

During the early 19th century, while the Industrial Revolution was in full swing, cities in Britain grew rapidly. Rural–urban migration in the early 19th century was comparable to rates observed in developing countries in the postwar period (about 1–2 percent a year). One might have expected these population shifts to have attracted capital to cities. In fact, social overhead capital stocks per capita declined during the 70 years up to 1830. As Williamson (1990, p. 273) notes, "Britain had accumulated an enormous deficit in her social overhead stocks by pursuing industrialization on the cheap."

This underinvestment had a high cost in human mortality. In 1841 infant mortality rates were 25–50 percent higher and the crude death rate 5.6 per thousand higher in England's major cities than in the rural hinterland, with most of the difference explained by crowding, city size, and density. The crude death rate differential declined dramatically by 1906 and disappeared by the 1920s.

The high mortality in cities had important costs beyond the obvious human and social toll. It created a spatial mismatch in labor supply, reducing the supply of labor in cities, where labor was needed, and fueling migration from rural areas. High rural–urban wage differentials, driven by strong demand for labor in cities, are evidence of a costly disequilibrium in the labor market.[b]

These costly losses persisted through most of the 19th century. Why were investments in social overhead infrastructure not made sooner? Through 1820 the costs of the Napoleonic Wars might explain part of this crowding out, according to Williamson (1990). The lumpy and long-term investments needed in infrastructure investments were more sensitive to interest rates than were investments in manufacturing. Later the attractive private returns to foreign investments (such as the railroads in the New World) may have won out over investment in social infrastructure, with high social but low private returns. Still, the economic returns to these investments were competitive. Estimates for the United States indicate that annual rates of return to water and sanitation investments there were 6–16 percent—much higher than the 4–5 percent earned on stocks or railroad bonds. Although government intervention makes sense in such situations, local authorities in Britain did not make these investments until much later.

Ignorance of the economic costs of inaction cannot explain local government delays in cleaning up "killer cities." The Great Sanitation Debate, prompted by the Chadwick Report of 1842, had already sensitized the middle and upper classes to the terrible plight of the urban poor. The report offered well-established technical solutions in water and sewerage and even computed cost–benefit ratios for investments using the concept of (if not the term) human capital. It made a compelling case for reform on economic and technical grounds, pulling together information and analysis that had been known for decades. According to the report, investment in urban infrastructure would yield three types of payoff. First, water and sanitation investments would be worthwhile for the rich, because reduced mortality and morbidity would reduce Poor Law expenditures and check the threat of diseases that could spread to the rich. Second, these investments would be worth the expenditure for the poor, because they would improve their health and reduce their doctors' bills. Third, better infrastructure would provide a net benefit for the nation, because the value of saving a human life far exceeded the costs of investing in sanitation.

Despite the strong net benefits, the infrastructure investments the report recommended were not made for decades. The poor could not make these investments—for reasons that are still relevant today in developing country cities. They could not internalize all the benefits of the investments, because upgrading infrastructure for one residence had little impact if neighbors did not follow suit. Moreover,

Box 1.1 *Continued*

capital markets were unlikely to lend to poor households against future health and productivity improvement. These factors combined with low homeownership rates and high transience to prevent the poor from tackling the problem themselves.

The better-off and the polity also failed to make the investments for 20 years after the debate had been launched. Public finance constraints were critical to this delay. The legal framework did not support long-term borrowing for local authorities until the revisions of the Municipal Acts starting in the 1830s, making it difficult for local governments to tap capital markets. Moreover, the inefficient and unjust tax system—resembling in many respects those in place in thousands of developing country cities today—made it difficult for local governments to take collective action even when it became possible to borrow.

Votes for the city councils that made the investment decisions at the time were based on ratable value; the electorate was thus very narrow. In Birmingham only 3 percent of the population was eligible to vote in 1861; in Leeds just 13 percent of the population could vote. The local taxes voted by these councils were assessed on the basis of the rental value of property. As a result, people with rental income were taxed much more heavily than others. The evidence even suggests that these taxpayers disproportionately made their way into the local councils to protect themselves from excessive taxation (Wohl 1983). Concerns about the costs of sanitation spending were well founded. The city of Leicester, a center for hosiery manufacture, began cleaning up the town in the mid-19th century partly because of the need for clean water for hosiery production.[c] Tax rates went up more than tenfold during this period.

The impasse was finally overcome in the 1860s, thanks to two factors. First, economic growth greatly increased the tax base. Ratable value in Manchester increased by a factor of almost 3.5 between 1840 and 1880 (Wohl 1983). Second, the central government stepped in to provide low-interest long-term loans for investments in water and sanitation.[d] This central government subsidy made investments more attractive and more equitably redistributed the tax burden for infrastructure improvements with high social value. The ramp-up in borrowing and investment was substantial: on average, annual borrowing by local authorities tripled between 1863 and 1873, doubling once again into the early 1890s. In Exeter the sewage treatment system started in 1896 cost about nine times the amount spent for excrement removal over the previous several decades.

Source: Williamson 1990; Wohl 1983.

a. Understanding the epidemiology of the great cholera outbreaks of the 19th century took some time. How it was done is a fascinating story.

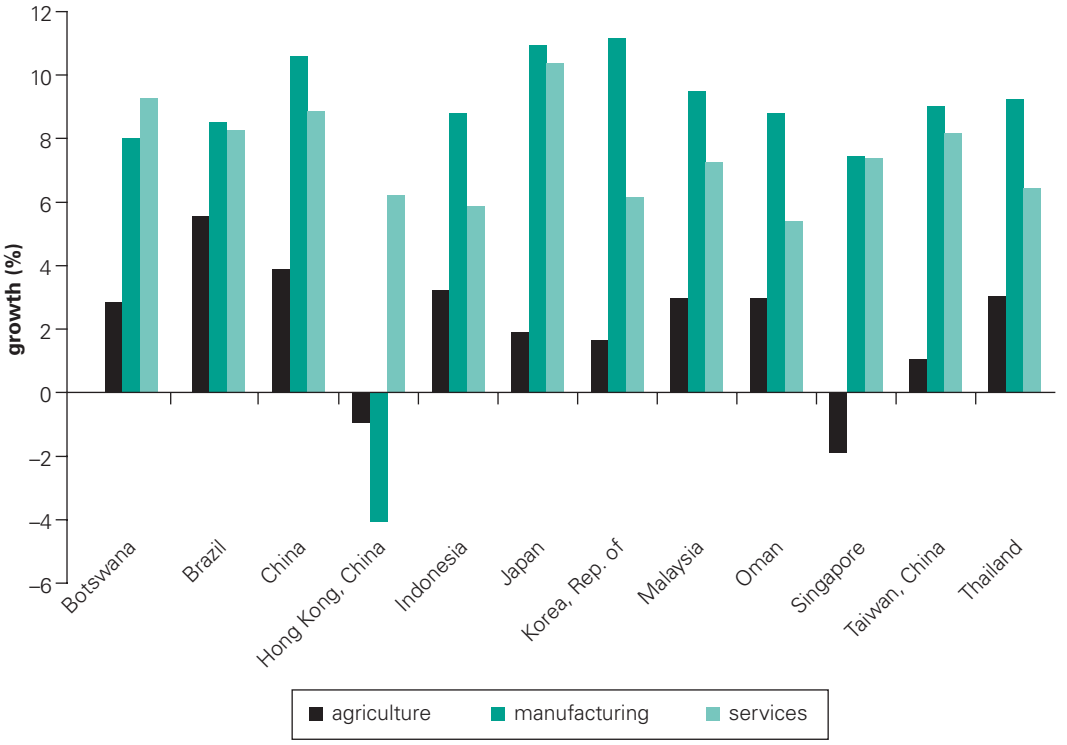
b. It is highly unlikely that this wage differential can be attributed to "urban bias." Nineteenth-century policies such as the Corn Laws actually favored agriculture; industry had negative effective protection, and social overhead capital expenditures favored the countryside, not the cities

c. The city of Tiruppur, India, a major hosiery export center in India, offers a fascinating parallel. Tiruppur was a pioneer in a public-private partnership for a major water supply project begun in the mid-1990s. Tiruppur was considered an especially favorable case, because the exporters' business was booming and their willingness to pay for clean water quite exceptional. Even so the project took years to negotiate, and ultimately some of the waste water treatment investments could not be completed because of high costs.

d. The transformation to modern sewerage systems in Britain's cities also has a public-private ownership dimension. It was difficult for municipalities to operate sewer systems without assurance of adequate water flow—of marginal interest to a private water supplier. In the second half of the 19th century, local authorities were helped by legislation that made it easier for them to purchase private water companies. Only five local authorities in England and Wales had public water companies in 1840; by 1871 a third of local authorities had public water supply (Wohl 1983).

Simply because agriculture has consistently grown more slowly than other sectors does not imply that it should be neglected. Good agricultural growth performance may accompany strong performance in other sectors, as the China and Thailand cases in figure 1.12 show. Productivity advances in agriculture offer scope for freeing up labor to work in manufacturing and services. Because the poor are disproportionately represented among those

Figure 1.12 Growth Rates in Agriculture, Manufacturing, and Service Sectors in Selected High-Growth Economies



Source: World Bank, *World Development Indicators 2007;* for Brazil: calculation using data from the *World Tables 1976*, World Bank and Institute of Applied Economic Research (IAER), Brazil, http://www.ipeadata.gov.br; for Japan: calculation using data from the *World Tables 1976*, World Bank, and Maddison, Angus, 2001: *The World Economy: A Millennial Perspective.* Paris: OECD.

Note: Growth rates are based on GDP in constant domestic prices. The calculations apply for different periods indicated in parentheses because of differences in availability of consistent data: Botswana (1965–2006); Brazil (1955–73); China (1965–2006); Hong Kong, China (2000–06); Indonesia (1960–2005); Japan (1955–73); Korea, Rep. of (1970–2006); Malaysia (1970–2006); Oman (1988–2004); Singapore (1975–2006); Taiwan, China (1965–2006); Thailand (1960–2006).

whose livelihoods depend on agriculture, making agriculture more productive can have powerful effects on poverty.

That said, the evidence is very strong that development strategies that seek to limit the growth of or neglect cities in order to focus on agricultural development are settling for lower rates of growth. Even among countries that have grown the most rapidly over the past 20 years or so, long-term agricultural growth rates never exceeded 5 percent, a rate of growth that is common in services and manufacturing. Dealing with urbanization and accommodating cities that grow rapidly because the dynamic manufacturing and services sectors locate there is an inevitable part of achieving sustained high growth.

Why Do Rapidly Growing Sectors Locate in Cities?

Industry and services are concentrated in cities. These sectors grow more rapidly than other sectors, so cities must be important to growth. But there

is more to this relation. A large body of literature explains why industry and services locate in cities.[4] The chapters by Gilles Duranton, John Quigley, and Anthony Venables discuss the role of agglomeration economies and the functioning of labor markets in cities, highlighting both productivity impacts and linkages with the growth process.

As Quigley points out in chapter 4, the fundamental question in urban economics is why people voluntarily live in close proximity to one another when there are costs to competing for land. The simple answer has two parts: efficiency gains and consumption benefits. Recent theoretical and empirical work provides a sense of the nature and significance of these gains.

The earliest concept of efficiency gain was geographical. Cities have long tended to locate around waterways to exploit transportation cost advantages. In the United States and Western Europe, for example, cities on the coasts, major rivers, or the Great Lakes were vital to industrial development. During the postwar period, coastal megacities have dominated most Asian economies (an exception is India). In Japan urban and industrial growth concentrated in the Tokkaido coastal corridor (Tokyo, Nagoya, and Osaka).[5] The concentration of producers and suppliers in this area enabled innovations such as just-in-time production techniques. Industrial development concentrated in the Seoul/Pusan region of the Republic of Korea and in the Taipei/Kaoshing region of Taiwan (China). In Indonesia, Malaysia, and Thailand, growth concentrated in export-oriented labor-intensive industries in the metropolitan megacities of Jakarta, Kuala Lumpur, and Bangkok. In China development has concentrated in Shanghai and the Pearl River Delta (Mohan 2006; Yusuf, Evenett, and Wu 2001). As the Asian megacity complexes have shown, location effects driven by transportation costs also tend to cumulate into other advantages, a process Burgess and Venables (2004) describe in detail.

Economies of scale offer both efficiency and consumption advantages to urban economies, manifested in several ways. Process industries, such as chemicals, steel, and automobiles, operate more effectively at higher volumes; for this reason they have traditionally been established in urban areas. Economies of scale in input markets affect a wide range of industries. Specialized services—such as accounting, tax advice, and intellectual property management—are easier to obtain in large cities. Specialization among input producers may also allow cost reductions, making local purchasers of their inputs more productive. Public services such as hospitals, theaters, orchestras, and sports stadiums require a critical mass of consumers to make them economically viable. The density of urban areas increases the range of such amenities.

4 Quigley (1998) provides a succinct summary of these advantages and the supporting literature. Fujita and Thisse (2002) and Duranton and Puga (2004) provide a detailed treatment of the theory of agglomeration economies.

5 By 1970 almost 60 percent of the urban population lived along this corridor. This concentration reduced the cost of infrastructure investments, which would have been much costlier with a more balanced spatial growth strategy.

Economies of scale in cities also reduce transaction costs. High densities in cities allow both workers with differentiated skills and firms with specific needs to reduce their search costs. This effect can operate even if all producers operate at constant returns to scale and there are no technological externalities (Acemoglu 1996). Operating in a dense urban environment offers efficiencies through the impact of large numbers on risks of fluctuating demands for both labor and products. If these fluctuations are imperfectly correlated across firms, both firms and individuals benefit from locating in cities. Spells of unemployment can be shorter and demand shocks and inventory costs lower in such environments.

Agglomeration effects in cities affect knowledge sharing. By bringing together large numbers of people, cities facilitate the kinds of face to face interactions needed to generate, diffuse, and accumulate knowledge, especially in industries that experience rapid technological change. This aspect of urban agglomeration economies has received less theoretical and empirical attention, but it has promise to be one of the more significant drivers behind dynamic growth in developing country cities.

The theoretical advantages of cities are not limited to high-income countries. Jane Jacobs put this simply and eloquently, noting, "Cities, not countries, are the constituent elements of a developing economy and have been so from the dawn of civilization" (1984, p. 32). In developing countries poor transportation and communication infrastructure tend to magnify the advantages of cities over the countryside. Location advantages can thus be even more valuable there than in developed countries. As developing countries seek to compete in increasingly integrated world markets, even static advantages conferred by cities help firms penetrate export markets, as Venables notes in chapter 2. The report by the Commission on Growth and Development (2008) underscores the significance of penetrating export markets as one of the key elements of sustained, rapid growth. Weak infrastructure could heighten the congestion disadvantages of cities as well, which may affect the optimal size of developing country cities. As Duranton (chapter 3) and Quigley (chapter 4) argue, however, there is no strong prima facie argument that urbanization has weaker advantages in developing countries than in high-income countries.

The empirical evidence on the presence of agglomeration economies in developed countries is strong. Rosenthal and Strange (2004) provide a comprehensive survey of the literature.[6] Most of the work in this area focuses on the United States and to a lesser extent Europe; a relatively few studies cover developing countries. Researchers show that doubling city size increases productivity across industries (urbanization economies) in the United States by 3–8 percent. Work that uses statewide data from the United States finds that a doubling of density is associated with a roughly 5 percent increase in productivity. Similar work for Europe finds the impact of density to be comparable (4.5 percent).

6 The discussion below draws heavily on Rosenthal and Strange (2004).

Henderson's (1986) work on Brazil and the United States finds that agglomeration effects tend to affect industries concentrated in a city (localization economies) more than all industries (urbanization economies). The effects in Brazil were broadly comparable with those in the United States. Within-industry agglomeration effects were such that without any other increases in inputs, productivity increased roughly 1 percent for every 10 percent increase in the number of workers employed in an industry in a given city. While this effect may seem small, it implies that by moving from a city with 1,000 workers to one with 10,000 workers, a firm would increase its productivity by a factor of 90. Overman and Venables (2005) summarize the results of studies on urbanization and localization economies in a variety of developing countries. Apart from one anomalous study that indicates localization diseconomies in India, the results, including those of other studies for India, are broadly the same.[7]

As in developed countries, evidence of localization economies in developing countries is somewhat stronger than for urbanization economies. One significant exception is high-tech industries in Korea, where a one standard deviation increase in the index of city diversity increases productivity 60 percent (Henderson, Lee, and Lee 2001). This finding is particularly interesting because Korea has had very strong growth performance even after reaching middle-income status. These findings on localization economies in developing economies are reinforced by case studies on spatial clusters of firms (Overman and Venables 2005).

The importance of the informal sector may distinguish cities in developing countries from those in developed countries. Some critics argue that informality is unproductive and raises the costs to the formal sector, crowding out agglomeration economies. In fact, the little evidence available on agglomeration economies in the informal sector suggests that it also benefits from agglomeration and that informal operators generally have a positive impact on their formal sector counterparts.

Studies on developed countries have tried to pinpoint the distance over which agglomeration economies affect productivity. The evidence points to rapid geographical attenuation of localization economies—beyond 5 miles in some studies, beyond 50 kilometers in others—with the distance varying by industry. Different types of agglomeration economies, such as knowledge spillovers and labor market pooling, have different geographic scopes. These narrow geographic agglomeration effects help explain why dense urban areas emerge in spite of congestion costs and why there is so much spatial concentration of economic activities. In the continental United States, for example, only 2 percent of the land area is covered by the urban built environment, home to 75 percent of the population (Henderson 2005; Rosenthal and Strange 2004).

7 The India result is difficult to explain, because of the high geographical concentration of industry in the same data sample.

Several studies have shown that city characteristics can affect productivity over as much as 20 years (see Rosenthal and Strange 2004). The main channel for these intertemporal effects is thought to be knowledge spillovers. Work on the United States has sought to understand the substantial urban wage premium—30 percent in one study—by differentiating the impact of selection (cities attract the best and brightest) from the impact of agglomeration for workers with long experience in cities. Correcting for selection narrows the wage differential to a still substantial 20 percent. Workers with longer experience in the city earn a premium over recent arrivals, a finding that is consistent with the view that knowledge-based agglomeration effects last a long time. Interestingly, these studies also find that when experienced workers leave large cities, their wages in the new location are higher the larger the size of the city of previous residence.

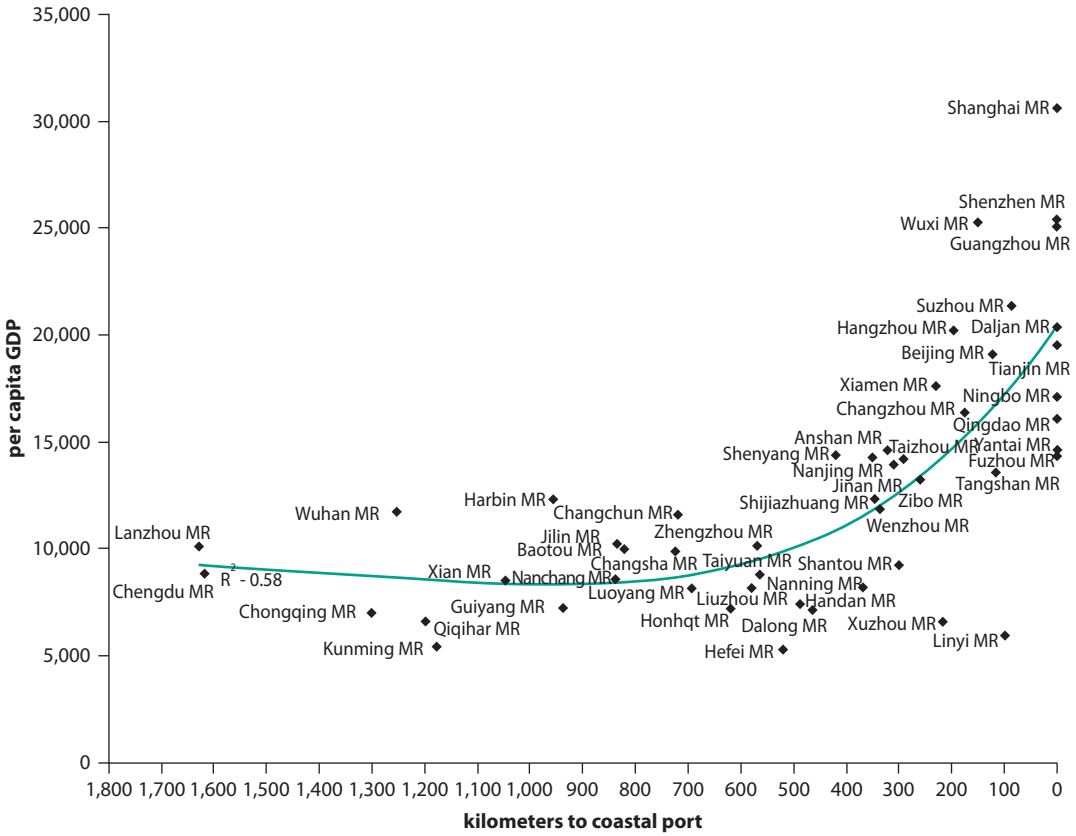
Other findings related to labor productivity (also discussed in Rosenthal and Strange 2004) come from studies that differentiate the "rat-race effect" from the selection effect. This research finds that cities do indeed attract professionals who work harder on average at all ages (the selection effect). When rewards for hard work are high and rivalry exists, young professionals put in even more hours than more experienced professionals (the rat-race effect). These results offer yet another dimension to the urbanization-productivity relation: cities make people work harder.

The notion that cities offer knowledge functions has been extended to consider innovation in products and processes. Using French data, Duranton and Puga (2001) validate their model of "nursery" cities, showing that large diverse cities can be good at providing the incubation function. Once firms find the ideal production process, industries eventually relocate in smaller specialized cities with lower-cost profiles.

The results on knowledge spillovers—which are particularly relevant for the growth process—are consistent with some of the stylized facts in developing countries, even if all the effects have not yet been validated econometrically. There is, for example, strong evidence of higher productivity in cities and persistent geographical advantage, as Venables notes in chapter 2 (see also Venables 2007). China's coastal cities enjoy a large income advantage—a factor of two to one over other urban areas—demonstrating strong geographic and cumulative urban agglomeration advantages (figure 1.13). These intracity differentials are in addition to the significant productivity advantage of urban areas over rural areas in China.

Evidence from Bangladesh provides further confirmation of productivity advantages in large cities in developing countries. Green (2007) examines variations in changes in household expenditures across 64 districts in Bangladesh. He controls for a number of variables that enhance productivity, including the literacy rate, the infant mortality rate, male and female school attendance rates, a measure of semifeudal large landholdings, the level of urbanization, the use of irrigation technology, initial-period expenditure levels, the percentage of households with electricity, and initial-period expenditure inequality. He finds that distance from Dhaka explains

Figure 1.13 Income Advantages of Coastal Metropolitan Regions in China, 2000



Source: Leman 2005, cited in Gill and Kharas 2007.

Note: The figure shows the situation of 53 metropolitan regions (MRs) in China in 2000.

a significant amount of the residual differences in expenditure growth, with every 100 kilometers from Dhaka reducing expenditure growth by a full percentage point.

Overman and Venables (2005, p. 5) suggest that large cities probably play a "nursery" role in developing country cities, even if the process of research and development and innovation is not identical to that in rich countries. They state:

> Nevertheless, entrepreneurs in low-income countries must also engage in a process of innovation and learning. Their focus is on what Rodrik (2004, p. 9) calls cost discovery: "What is involved is not coming up with new products and processes, but discovering that a certain good, already well established in world markets, can be produced at home at low cost.". . . The urban nature of these cost discovery processes remains largely unexplored. However, Hausmann and Rodrik's (2002) emphasis on tacit knowledge (the kind that cannot be easily codified in to blueprints) in the self discovery process strikes a chord with urban economists who have long seen such knowledge as playing a key role in the information spillovers that occur within cities. This suggests that,

just as for their developed country counterparts, this process of cost discovery is likely to be significantly easier in the information rich environment of large, diverse urban areas.

Hausmann and Rodrik (2002) document an extreme degree of specialization and clustering of exports in Bangladesh; the Dominican Republic; Honduras; Republic of Korea; Pakistan; and Taiwan, China. According to Venables (2007), these patterns suggest that local agglomeration economies are at work in determining international trade patterns. Disaggregated at the six-digit SIC level, the top four product lines account for at least 30 percent of exports to the United States by each of these countries. Moreover, there is very little overlap in export specialization across similar countries.

The evidence from developing countries should be much better than it is. Nonetheless, it shows that the same sorts of agglomeration economies are at work in poor countries as those that are much better documented in richer countries. A few important policy indications emerge from these findings:

- Cities offer productivity advantages that are both static and dynamic. Hence it makes little sense to discourage or try to reverse urbanization. Rural development cannot be a substitute for healthy urbanization. Indeed, it is hard to imagine that much rural-based industry could thrive for export in today's competitive trade environment. The rapid urbanization and growth of large cities in developing countries show that, on balance, the powerful economies of scale and other agglomeration effects at work outweigh the very substantial diseconomies associated with developing country megacities. The urbanization process needs support to help reduce congestion costs. Focusing on making urbanization work would be more productive than trying to stop it.
- The productivity advantages of cities are driven largely by externalities. As a result, market outcomes may be productive, but the size distribution of cities is likely to be inefficient, as the clustering effects described above drive cities to become too large. Chapter 3, by Duranton, sets forth the theory and discusses the empirical analysis of these effects. Unfortunately, in practice, little is known about either the costs of excessive city size or what does and does not work to encourage development of more-efficient new cities. Some interesting research on China (Au and Henderson 2006a, 2006b) suggests that from an economic viewpoint, it is much more costly to be undersized than oversized. This work indicates that real output per worker is quite flat at sizes larger than the optimum city size, so that the costs of a given population reduction below the optimum are nearly three times higher than the cost of adding that same population above the optimum. But much more work is needed on this issue.
- Caution is in order when seeking to decentralize productive activities from large cities. Overman and Venables (2005), Duranton (chapter 3), and Venables (chapter 2) argue instead for a neutral stance that avoids favoring the main city and possibly a policy that signals to

private investors the desired location for a new city. This approach may not fully address important practical issues for policymakers. When capacity, both financial and technical, is scarce, governments have to make choices about where to locate infrastructure investments and where to improve services. Many efforts to develop secondary cities have been wasteful. In contrast, China's strategy of favoring coastal cities in the early reform phase reaped rich growth rewards. Because part of the special privileges accorded those cities included the means to finance infrastructure improvements, the worst congestion costs were avoided more successfully than in many other countries (Peterson 2005). Without more research and a more systematic understanding of experience, the danger of cities becoming too large remains difficult to document. Identifying effective policy instruments to address it is thus problematic. If concerns about primacy or cities being too large become an excuse for neglecting necessary urban infrastructure investments, such policies will be very costly.

- The realization of agglomeration economies in fast-growing cities is likely to give rise to very significant spatial inequalities in productivity and income, across regions and cities, between rural and urban areas, and within cities. As a result, policymakers will face important noneconomic concerns, such as political and ethnic tensions, which must be balanced against the economic benefits of productive cities. In chapter 5 Sukkoo Kim discusses the economics of spatial inequalities, how they have evolved over time, and how policies to address them have fared.

Traditional Arguments against Urbanization

Urbanization is inextricably linked to industrialization and modernization, both historically and among rapidly growing developing countries today. There are good economic reasons for this relation, supported by both theoretical and empirical work. Cities have been shown to support high-productivity and high-growth activities in ways that rural areas simply cannot. Despite this evidence, there is discomfort with the urbanization process, and few countries have an explicit policy stance that proactively seeks to incorporate cities in the growth process. Part of the discomfort may be explained by three influential, but largely erroneous, beliefs about urbanization in developing countries:

- Rural–urban migration is unmanageable.
- Rural–urban migration is unproductive.
- Urban growth is driven by pro-urban bias rather than economic fundamentals.

These conjectures emerged in the 1960s, as urban population growth in developing countries was reaching its peak; they have continued to influence policy thinking since. It is worth briefly reviewing the evidence that has emerged since these views became influential.

Is Rural–Urban Migration Unmanageable?

It is commonly argued that developing countries have disastrously overurbanized or are urbanizing at calamitous rates. In fact, their experience has been fairly conventional in important respects (Williamson 1988; National Research Council 2003). The urban share of population in developing countries has been rising since about 1850. Urban population growth in developing countries peaked between 1950 and 1975 and is predicted to continue to decline. During the period of peak growth, the share of urban population increased from 17 to 28 percent (Preston 1979)—nearly identical to the increase that took place in high-income countries in the last quarter of the 19th century (Williamson 1988). Rural–urban migration rates for developing countries as a group in the postwar period were comparable to those in the United Kingdom during the Industrial Revolution (about 17–18 percent).

Developing country experience is distinctive in one important dimension: the total urban population increase over the period is much higher. Urban populations in developing countries increased by 188 percent between 1950 and 1975—a much larger increase than the 100 percent for developed countries between 1875 and 1900. This high population growth in developing countries reflects a demographic success story: the dramatically rapid transition to lower mortality rates that developing countries experienced in both rural and urban areas in the postwar period. In early 19th-century Britain, the rate of natural increase was far lower in cities than in the countryside, because death rates were so high. This made migration a far more important source of population growth, accounting for 60 percent of the increase (Williamson 1990). In contrast, in developing country cities, immigration accounts for only about 40 percent of population growth (National Research Council 2003).[8] Far from being overwhelmed by excessive migration, developing country cities have experienced migration patterns similar to those that occurred elsewhere, although they were also accompanied by rapid natural increase.

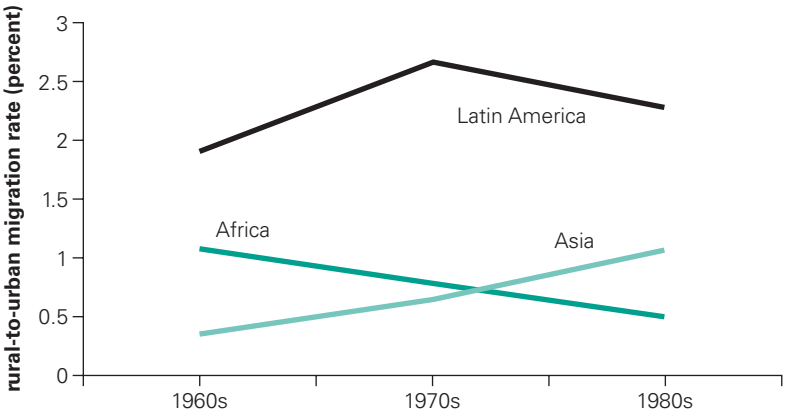
Rural–urban migration rates vary considerably across developing countries and over time (figure 1.14). Latin America, the first region to experience rapid migration, achieved the highest rates of urbanization in the 1960s–80s period, peaking in the 1970s. The subsequent decline reflected the already high rate of urbanization (more than 75 percent) and probably the economic slowdown that began in the 1980s.

Africa's rates of migration peaked sooner, in the 1960s; rates have declined by half since then.[9] Already in the 1980s, before the advent of major structural adjustment programs in Africa that reduced "urban bias,"

8 This is true of the median country. For data on different developing country regions, see table 1.1.

9 Unfortunately, these decompositions of urban population growth across a range of developing countries have not been brought up to date, and the coverage of the censuses on which they are based is very uneven, especially in Africa. It would be very useful to have more systematic analysis of how these trends have evolved over the past 20 years and more recent census data for many African countries. Satterthwaite (2007) discusses these issues in detail.

Figure 1.14 Estimated Rural-Urban Migration Rates in Africa, Asia, and Latin America, 1960s–1980s



Source: Data from Chen, Valente, and Zlotnik 1998, cited in National Research Council 2003.

Note: Africa includes North Africa and Sub-Saharan Africa.

migration accounted for only a quarter of total urban population growth in Africa (table 1.1). Thus while the share of urban population has steadily increased in Africa, often without economic growth, both migration rates and the share of urban population growth accounted for by migration appear to be in secular decline. The high rates of urbanization in Africa are driven primarily by the high overall rate of population growth—the highest of any region of the world (UNFPA 2007)—and by the relatively small size of the urban population.

Asia experienced a significant secular increase in both migration rates and the share of population growth attributable to migration. These demographic shifts, combined with rapid economic growth, have been accompanied by substantial reductions in poverty in both rural and urban areas. This evidence on regional patterns, based on incomplete data for a number of countries, can be seen only as indicative. It nonetheless suggests that migration rates are neither exploding nor responding perversely to economic signals. Migration rates are rising where economic growth is robust.

Table 1.1 Percentage of Annual Urban Population Growth Attributable to Internal Migration, by Region

Region	1960s	1970s	1980s
Asia	40.4	46.7	63.6[a]
Latin America	40.1	40.5	33.9
North and Sub-Saharan Africa	41.2	40.6	24.9
Developing countries	40.3	44.1	54.3

Source: Data are from Chen, Valente, and Zlotnik (1998), cited in White and Lindstrom (2005).
Note: The regions follow UN definitions. Africa includes both North and Sub-Saharan Africa.
a. The figure for Asia excluding China in the 1980s is 48.9 percent.

Urban populations are growing in Africa primarily as a result of demographic pressure—more so than in any other region. Strategies that seek to manage urban population growth by directing resources away from basic urban services to make cities less attractive to migrants are, in this light, misdirected.

Cities in developing countries have coped far better than was expected when urbanization took off. Urban populations in least developed countries increased by 1.7 billion between 1950 and 2000. Yet the cities of 60 million predicted by Davis, Park, and Bauer (1962) have not yet materialized. The growth of cities in the developing world has placed unprecedented demands on urban services. The common perception of urbanization is colored strongly by images of slums, grinding urban poverty, traffic jams, and air pollution. In fact, however, as Mohan and Das Gupta (2003) argue, developing countries have coped with these demands surprisingly well—even in the face of rapidly growing urban populations, difficult fiscal conditions, and tight constraints on human resource capacity. During the 1990s more than 250 million people in China, India, Indonesia, Korea, and the Philippines were provided with access to clean water, and nearly 300 million gained access to sanitation. Between 1990 and 2000, 32 million people were provided with clean water supply and 23 million people with improved sanitation facilities in Brazil. Coverage rates for these urban services increased in all these countries during the 1990s. Per capita electric power consumption in many countries has increased steadily and substantially, tripling between 1980 and 2000 in China and in the Islamic Republic of Iran and increasing by a factor of more than eight in Indonesia.

The incidence of poverty in cities also declined over this period of rapid urban growth. East Asia lifted unprecedented numbers of people from poverty (see figure 1.8). In Bangladesh the incidence of poverty in Dhaka fell 14 percent during the 1990s, while population grew at 6 percent a year (World Bank 2007b). As chaotic as Dhaka's urban development seems to be, its residents are leaving the ranks of the poor in large numbers.

This evidence should not be interpreted to suggest that urbanization gives no cause for concern. What it does show is that the track record of coping with high rates of urban growth is no disaster. Mohan and Das Gupta (2003, p. 15) put it well:

> Thus there is nothing to fear from the rapid urbanization expected in the next twenty to thirty years, and beyond. We know that we can cope with the unprecedented Asian urban challenge. However, this is not a call for complacency, but is a fact that should give us confidence for the future.

Is Rural–Urban Migration Counterproductive?

The Harris-Todaro model emerged in the late 1960s (Todaro 1969; Harris and Todaro 1970).[10] It proved very influential as an intuitive explanation for the large informal service sector in developing country cities, which

10 Williamson (1988) and Lall, Selod, and Shalizi (2006) offer comprehensive critical reviews of the literature in this area, on which this discussion draws.

were viewed as harboring hidden unemployment. The model was pessimistic about urbanization, arguing that rural–urban migration was counterproductive because migrants moved for the wrong reasons—and did so on a continual basis. Rural–urban wage gaps reflected not only productivity differences but also artificially high wages that attracted too many migrants. Rather than offering economic benefits, migration to cities and the eventual closing of the wage gap merely resulted in more workers waiting through unproductive spells of unemployment or underemployment in a bloated service sector. This vision contrasts sharply with work on rural–urban migration during the Industrial Revolution in the United Kingdom. Using a computable general equilibrium model, Williamson (1990) estimates that labor market imperfections prevented migration and led to a deadweight loss of more than 3 percent of GDP.

Worst of all, the Harris-Todaro model predicted that because workers came to the city to participate in a lottery, hoping for formal sector jobs, creating employment only made the problem worse by improving the odds in the lottery and attracting more migrants whose productivity was lower in the cities than in the countryside (the Todaro paradox). This conclusion was particularly important for policy, because it argued against making cities attractive, implicitly endorsed measures to discourage or reverse migration, and reinforced the tendency of poverty and development programs to focus on rural areas.

The Harris-Todaro model has been very influential. It turns out, however, that evidence supporting the predicted link between urban unemployment and migration—and hence their broader pessimism about the economic impacts of urbanization—is weak. Many of the critical assumptions and predictions of the model have not been supported by subsequent empirical studies of labor markets in developing countries. Richer and more plausible alternative models of migration have since emerged. Models of family migration strategies that send workers to the city, for example, show that interactions with the countryside upon migration to the city have been significant. Yet the absence of such interaction is critical to the Todaro paradox (Stark and Lucas 1988; Stark and Levhari 1982). Evidence of wage rigidity in the formal sector has been questioned. Real wage erosion in a number of African countries started in the 1970s (Weeks 1994). Even in Africa institutionalized high wages turn out to have been limited largely to East and Central Africa, where they represent the legacy of high wage policies under the British colonial regime and a short period of trade union power following independence.[11] In West Africa there was a minimal and sometimes even negative urban income premium as colonialization ended. The data do not support rising wage gaps between industry and agriculture, a necessary premise for increases in unemployment in the face of urban job creation. Moreover, contrary to the model's prediction, as soon as they get

11 Measures to reduce high labor turnover in the westernized sectors of British East Africa included a high wage policy whose goal was to provide sufficient income to support a family in the urban areas (Weeks 1994).

jobs, migrants tend to earn more than they did in the countryside. Studies provide empirical support for some behaviors embodied in the model—such as migration responding to wage differentials—but the evidence that the Todaro paradox actually holds in developing countries is weak (Lall, Selod, and Shalizi 2006).

Also damaging to the Harris-Todaro argument are the findings of Williamson (1988), who argues that the "problem" that the model was intended to explain was exaggerated. A number of studies show that the growth of the service sector in developing country cities was neither disproportionate nor composed primarily of unskilled "surplus labor" from the countryside. Once early surveys indicating growing unemployment in developing countries in the 1960s were revised, little support remained for the concept of high and rising unemployment in cities. Nor was there ever much evidence that recent migrants were more likely to be unemployed than others in the city labor force.

The poor performance of some African economies experiencing rapid urban growth rates may have contributed to the enduring appeal of the Harris-Todaro model, which despite its flaws "influenced policy for decades" (Lall, Selod, and Shalizi 2006, p. 47). In 25 of the 56 countries Collier (2007) terms "Africa$^+$ countries"—countries that are falling behind—urbanization without growth has occurred. However, both weaknesses in the model and its inability to explain underlying demographic trends argue against using it as the hypothesis of first resort.

Other economic constraints may have more substantial effects on economic performance. Reducing fertility may be a better policy response to high urban population growth than reducing migration (Chen, Valente, and Zlotnik 1998). If a low-income agrarian economy suffers from agricultural distress or civil unrest, migrants are likely to be pushed into cities, resulting in temporarily high unemployment or a proliferation of low-productivity service sector jobs as migrants barely get by. High commodity prices may lead to overvalued exchange rates and resource shifts to the nontraded sector in cities. In such cases remedies such as suitable macroeconomic or agricultural policies should at least be explored before assuming that reducing the attractiveness of cities by withholding investments in basic amenities is the best policy response.

The economic stagnation in a number of African countries is a disturbing trend even if growth rates are indeed driven by climate and conflict rather than high wages and better services in cities. Part of getting growth back on track should be taking a view of how cities will ultimately serve as platforms for growth. Allowing secular deterioration in basic services, as has happened in many of these countries, may well compromise prospects for achieving this goal.

Is Urban Bias Widespread and Enduring?

The concept of urban bias—closely linked to the notion of pathological urbanization and migration—has been very influential in guiding aid and

development programs away from cities. Lipton's (1976) work on urban bias, which is both simple and sweeping, is the most influential articulation of the concept. Lipton argues that policy distortions favor city growth, harming the rural poor while encouraging excessive migration to cities. Industrial protection, cheap credit, and subsidized local services financed out of general tax revenues are among a long list of policies that presumably shift economic activity to cities. Empirical work has focused largely on measuring urban bias (see Agarwala 1983; Little, Scitovsky, and Scott 1970).

Rural bias is rarely discussed, but there is no logical reason why distorting policies might not sometimes favor the countryside unduly. The existence of urban bias has virtually ceased to be an empirical policy question; it is often simply assumed to be present if the poor continue to be disproportionately represented in the countryside (see, for example, Majumdar, Mani, and Mukan 2004). By this logic, focusing on how cities can facilitate industrialization and growth should be a lower priority, cities should fend for themselves, and subsidization of urban areas should be avoided (subsidization of rural areas is rarely questioned). This simplification of thinking about urbanization policy is what has made the concept of urban bias most problematic.

In practice, the concept of urban bias groups a host of policies, all of which might have merit in specific circumstances but often do not. The antidote to such bias often involves focusing on the poor in the countryside and avoiding subsidies in cities, even if many of the poor live and work there. This approach does not distinguish between subsidies to public services that make cities livable and productive (common even in high-income countries) and subsidies to specific industries and food products, where the case for government intervention is much weaker. Rather than examine each of those policies that fit under the "urban bias" umbrella on its merits, the response has been to focus development spending on the countryside and avoid support to cities. Rural and urban areas are pitted against each other, with development policy conceived as a zero-sum game for dividing the subsidy pie. Lost is the notion that the rapid growth that only urban areas can produce will reduce poverty and add to the revenue base to finance assistance to the rural poor. Moreover, the focus on avoiding urban bias has diverted attention from understanding some of the institutional and social constraints that may have driven policies that created urban bias in the first place.

The example of Africa is instructive. Many of the stylized features of urban bias were present in the early postcolonial period in many African countries. Weeks (1994) argues that much of this bias, such as high formal sector wages, reflected specific political imperatives and institutional constraints following independence rather than an explicit strategy to favor cities. In some East African countries, unions played an important role in the independence struggle—and expected rewards after independence. As a reaction to colonial policy, countries sought to industrialize and build prestigious public works, which naturally meant investing in cities. Given the

structure of the economy, agriculture was the only sector that could generate much tax revenue. Very weak government administrations in the immediate postcolonial period had limited fiscal options. Weeks argues that taxing external trade was attractive because it was simple. In contrast, administering direct taxes on farm income—difficult in the best of circumstances—posed insurmountable difficulties in Africa right after independence. As a result many governments resorted to highly distorting marketing boards to extract fiscal resources indirectly. While all of these measures undoubtedly hurt agriculture, many of them reflected very real constraints on fiscal instruments. Reducing these distortions, which attracted so much attention under the guise of urban bias, did not lead to a resumption of growth. Significant constraints to growth—related to geography, climate, and colonial history—apparently lay elsewhere (Collier 2007).

Structural Transition and Urbanization

These insights from Africa's experience highlight issues at the crux of managing urbanization productively in developing countries. Urbanization involves millions of individual decisions about where to live and work. It usually accompanies positive economic developments, such as industrialization and entry into export markets. Sometimes, as appears to be the case in some parts of Africa, it may respond to adversity in agriculture or to social conflicts. Measures to slow the urbanization process have almost always failed, because they sought to thwart a response to strong economic rewards or pressures.

Whatever the driving forces, people typically move to cities well before the institutions emerge to accommodate an orderly urbanization process. Urbanization therefore nearly always involves a host of messy problems—unsightly, unsafe, or unhealthy development; congestion; skyrocketing land prices; and highly questionable real estate practices—at least for a while. Many of these problems are perceived as failures, although they often emerge in the face of economic success. To make modern cities work, a transformation, not incremental change, in fiscal and administrative institutions, is needed, and it often comes in response to a crisis of some kind. The following sections examine some of the most important structural transitions that urbanization requires.

Mobilizing support for urbanization. Political economy makes it harder to adopt policies that support urbanization—more so in some places than others. According to Lewis (1977), in 19th-century Argentina, the landed aristocracy that emerged with the development of foreign-financed agricultural exports was a major constraint to the development of industry and the creation of a supporting environment in cities. By contrast Australia, dominated from the outset by urban communities, was able to put in place policies to make industry profitable and build the cities to support it. In countries in the early stages of urbanization, governments, especially democratic governments, may find themselves pressed to invest

tax dollars in infrastructure for growing cities that are essential to the economic future of the country but currently house only a minority of the population.

Historically, the governments of economically dynamic cities often operated with political models that explicitly or implicitly contested economic and political power with higher levels of government. Pirenne (1922) documents both the economic dynamism in cities and the deep-seated conflicts between governance systems that supported trade in cities and protection in the countryside in medieval and Renaissance Europe. In Bangladesh and India, important independence leaders held prominent positions in local government during the independence struggle.[12] DeLong and Shleifer (1993) provide empirical support for earlier findings that cities governed by absolutist governments (princes) experienced lower economic growth (measured by growth in city size) than cities governed by more market-friendly systems (merchants) in the 800 years preceding the Industrial Revolution. These historical differences between city governments and nation-states have often slowed the transition to policies and governance structures that are well suited to providing the local public goods growing cities require.

Financing public goods. Fiscal constraints can profoundly affect the scope of feasible urbanization policy. Cities require public goods to manage the high densities that engender agglomeration economies. Productive and healthy urbanization requires finance to support lumpy investments in expensive networked infrastructure. The demand for these public goods arises just as industrialization is also making substantial claims on resources (Linn 1982). For these reasons, there is an historical tendency for urbanization to coincide with foreign borrowing (Lewis 1977). In the best of circumstances, local public goods are not easy to finance at the city level. National governments can typically mobilize fiscal resources with less distortion of labor market and investment decisions than local governments, hence the case for fiscal federalism (see, for example, Broadway 2001). In theory, optimal land taxation could be used to finance local public goods, but doing so is difficult in practice in developing countries. A public finance system that works for cities with stable populations does not necessarily generate the resources needed to modernize rapidly growing cities.

Cities in low-income countries have large informal economies that are difficult to tax, as Richard Arnott notes in chapter 6. This informality is often a natural outcome of accommodating rapid population and economic growth in cities. Widespread informality undermines myriad elements of traditional local finance, including land taxation, recorded real estate transactions, and transparent market-based land valuations, to name a few.

12 Pandit Nehru, Sardar Patel, Acharya Gidvani, and Subash Chandra Bose, all Congress Party leaders in the fight for independence, held prominent positions in major municipal corporations in the 1930s.

The drivers of informality are many. Institutional capacity to protect property rights, enforce regulations, and manage planned urban expansion is weak. In Bangladesh, for example, Siddiqui (1997) estimates that it would take nearly 50 years to clear the existing backlog in land records. Meanwhile Dhaka's population was growing at 6 percent a year (World Bank 2007b). Many, sometimes most, low-income residents of cities are often too poor to live in housing built to standards the authorities consider decent enough to regularize. Local governments do not have the resources to finance the investments needed to provide services to all, yet no residence can be considered formal without these services. The result is that many inhabitants of cities live in informal areas and fall outside the public finance net. They usually pay for services at far higher prices than formal service providers charge. They pay—often dearly—for protection to remain irregular; as long as they remain informal, their payments do not contribute to the fiscal base. As Arnott suggests, widespread informality in cities can lead to a vicious circle of weak fiscal base and very inadequate infrastructure.

This narrowing of the local tax base dramatically complicates the politics of raising local revenues. The constraints identified in box 1.1 in 19th-century Britain were overcome only when central subsidies were provided to ease the local fiscal burden of making economically sound investments in sanitation. Paris's experience illustrates another source of public finance—land transactions—and shows how fragile such resources can be if property holders rebel (box 1.2). While reforming its fiscal system in the 1990s to reassert central fiscal control, China still left local governments scope to use land appreciation as a form of capital finance in booming economies. The resulting expansion of urban infrastructure has been nothing short of dramatic, even if extensive waste and significant risks have been part of the process (see Gao 2007; Su and Zhou 2007). Brazil financed a substantial expansion of urban water and sanitation facilities in the 1970s and 1980s with a system of centralized planning, regulation, and financing, almost doubling sanitation coverage in a decade. With the slowdown of economic growth in the 1980s and decentralization, however, the system was restructured, and investments have declined (Cortines and Bondarovsky 2007).

A sound system of public finance for local public goods does not emerge naturally in poor urbanizing countries. Making this transition effectively deserves more attention in the development process and requires central government support in some form.

Modernizing real estate and financial markets. Rapid urbanization and economic growth require a third significant transition: the modernization of real estate markets and systems for financing them. Rapid increases in low-skill, low-wage jobs that fuel growth in developing country cities lead to influxes of low-income city residents who need housing convenient to their work. The businesses offering jobs need land for shops and factories. Because of agglomeration economies, they all want to locate in the same places. A functional real estate market is essential for allocating this resource to

Box 1.2 How Baron Haussman Financed the Modernization of Paris

In the early 19th century, the population of Paris, which had hitherto grown very slowly, expanded rapidly, doubling in 50 years. Conditions of life for the vast majority of the population were miserable and unhealthy. Three cholera epidemics had ravaged the city. The first and worst, in 1832, killed 20,000 people, nearly 3 percent of the population. The casualties included the prime minister, Casimir Perier, but the lower classes suffered disproportionately from the disease, giving rise to considerable social unrest. The Revolution of 1848, seen as an urban uprising against crowding, miserable housing, and high rents, lent urgency to the renovation of Paris. Emperor Louis Napoleon made the modernization of Paris his priority, appointing George Eugene Haussman as prefect of the Seine in June 1853 to achieve this goal.

With the strong support of the emperor, Haussman remade the face Paris—at no small cost. Haussman estimated that over 18 years, he spent 44 times the annual budget of the city on capital works (Pinkney 1957). Others estimate that the capital spending for Haussman's series of improvements was equivalent to the annual budget of France for an entire year (Marchand 1993).

Yet in many ways the finances of Paris at the time Haussman started his work resembled the meager budgets of poor developing country cities today. In the preceding 30 years, while the population had soared, revenues and expenditures, although broadly in balance, stagnated. Seventy percent of revenue came from indirect taxes, primarily the *octroi*, a medieval tax charged on entry into the city (Marchand 1993). Ten percent of all revenues were paid to the central government. About two-thirds of the population was exempt from direct taxation, considered too destitute to pay. Spending on capital investment and maintenance was limited to about 15 percent of the total budget. This fiscal environment was hardly ripe for the transformational change Haussman envisaged and the 16-fold increase in capital spending needed to achieve it.

Changes in the expropriation laws offered Haussman the wherewithal both to remake the city and to finance it expeditiously. In 1852 a new law was passed permitting expropriation of entire blocks, not just rights of way. Each expropriation required passage of a law, however, making the process extremely cumbersome. Later that year this law was modified to allow expropriation by imperial decree. Haussman used these powers liberally. As he remade Paris's layout and infrastructure, he resold any surplus expropriated land at a handsome profit, thus financing his operation through the value created from his public works. Haussman's profits were estimated at four times the original subsidy provided by the state (Marchand 1993). Up until 1858 this method was successful. But landowners eventually moved the Council of State to respond. It rendered a decision that all improved lands had to be resold to their original owners at the original price at expropriation, notwithstanding the change in market value the improvements had effected. In 1860 the courts handed down a decision that expropriation payments had to be paid immediately, not at eviction, thus advancing the costs of expropriation by several years (Marchand 1993).

These two decisions created new pressures on cash flow and forced Haussman to go to both the capital markets and his suppliers to fund further operations (Pinkney 1957). Relying on these arrangements alone was a less robust financial model, and rising real estate prices, a byproduct of Haussman's success, made it far more difficult and expensive to complete the later phases of his work. Ultimately, the city became heavily indebted and Haussman ran afoul of the city council, as it asserted its rights of oversight and control. Jules Ferry, a republican deputy, immortalized the dark view of Haussman's financial engineering in *Les Comptes Fantastique de Haussman*. Combining the debts Haussman incurred and debts for reparations of the war of 1870, the debt per inhabitant in Paris was twice that in New York and three times that in London by the end of the 19th century (Marchand 1993). It was only the inflation of the interwar period that eventually reduced the debt burden, ruining many bondholders.

Source: Marchand 1993; Pinkney 1957.

its best use. Yet the capacity of the formal real estate market to respond is limited in most developing countries, for many reasons.

A number of features of the typical developing country city combine to make housing supply much less responsive than it should be. Traditional systems of land ownership, registration, and taxation are rarely able to

accommodate a high volume of transactions and rapid turnover in land use. Planning, zoning, and building standards resemble those of high-income European cities. These standards make housing that is affordable for most of the city population illegal and do little to alleviate the chaotic conditions in these neighborhoods. To compound the problem, the military or parastatals often control large parcels of economically valuable land in the cities, effectively taking this land off the market. Infrastructure service providers often have neither the finance nor the capacity to expand and upgrade network infrastructure to provide for occupying land at high densities. Conversion of agricultural land surrounding cities can be both burdensome and socially contentious. In such environments countries successfully tapping the global market to industrialize will find that growth in the demand for housing and land in cities far outstrips the supply response.[13] A very common result is high real estate prices, in some cases comparable to those in large cities in high-income countries—even in very poor countries like Bangladesh (Buckley and Mathema 2007; Buckley and Kalarickal 2006; World Bank 2007b). These market outcomes create great social and political pressures for governments to do something, even when the problem is a byproduct of economic success.

In chapter 6 Arnott discusses some of the options for governments facing these problems. There are no easy fixes for addressing this kind of market imbalance driven by structural change. It is too costly for the government to provide housing directly for low- and middle-income groups on a wide scale. In most cases, government housing projects are built to unrealistic standards, and they rarely reach truly low-income households. Singapore's extraordinary experience of providing public housing for virtually all needy residents benefited from exceptional circumstances, such as full government control of land and the absence of a hinterland. The most effective programs in developed countries (rental subsidies) are difficult to use when informal economic activity is widespread.

Despite these difficulties, developing country governments must do something to improve urban living conditions in the short run. The response should involve providing basic infrastructure and reasonable security of tenure for the poorest; limiting subsidies for public housing programs, which do not reach the neediest in typical market conditions; and improving basic infrastructure networks to allow a healthy expansion in sought-after cities. In the medium term, governments can often do more by doing less. Unrealistic planning standards marginalize lower-income residents by making legal housing unaffordable (Bertaud 2008). Tight planning norms and strong demand in real estate markets combine with weak institutions and corruption to make real estate development expensive and slow, weakening the supply response just when it needs

13 Immigration to wealthy countries is another aspect of globalization that has a strong impact on real estate markets. Remittances from nationals living abroad, which are often invested in real estate, may drive prices well above the capacity of local wage earners to pay (Buckley and Mathema 2007).

to be stronger. As incomes increase, fiscal capacity improves, institutions evolve, and the elasticity of land supply and purchasing power for good housing increase. It is at this stage that standards closer to those of rich countries become feasible.

This transition can be long and painful. It can be helped along through financial innovation. When properly documented, real estate assets are excellent candidates for finance. Because these assets are long lived, they offer good investments for institutions with long-term liabilities. They offer some of the best collateral for borrowing. Long-term mortgage finance can dramatically improve households' capacity to purchase decent housing. Mortgage markets have developed and liberalized very rapidly in the past 20 years (Buckley and Kalarickal 2006). This market now extends to developing countries, with mortgage credit growing at more than 20 percent a year in China and India in recent years (Buckley and Kalarickal 2006). For long-run development, these changes are necessary and beneficial. But as with all financial innovations, in the short term there is scope for both instability and abuse. In chapter 7 Dwight Jaffee examines a highly visible and recent example of this cycle—the subprime mortgage crisis in the United States—drawing lessons from it for developing countries. While the subprime crisis seems unique to the U.S. mortgage market, finding the right balance between financial innovation that heightens the risk of a painful crisis and financial repression that rations financial services, typically depriving the neediest, is a universal challenge.

Two factors make managing innovation in mortgage markets in developing country cities particularly tricky. First, inelastic supply is often the primary constraint in urban real estate markets in developing countries. Mortgage finance, while helpful to individual purchasing households, operates on the demand side. If the supply response is price insensitive in key real estate markets, in the short run expanding access to mortgage finance may simply create more pressure on demand and prices. Without measures to enhance a supply response, policymakers may be disappointed in the ultimate impact of expanding mortgage credit on housing prices and affordability. Rapid expansion of mortgage finance in highly regulated or poorly functioning real estate markets may even run the risk of financing an asset price bubble. Moreover, when access to market-rate mortgage credit is introduced in environments characterized by high levels of informality, the reach of mortgage finance beyond the highest income classes can be very limited.

Second, importing financial innovation to developing countries in the area of mortgage finance can be very risky. Argentina, for example, issued mortgage-backed securities as early as 1996. Because the local financial sector was seen to have a number of shortcomings for such issues, the securities were sold in international markets denominated in U.S. dollars (Chiquier, Hassler, and Lea 2004). Because they placed foreign exchange risk with borrowers ill-equipped to manage it, these securities fared poorly during the economic crisis in Argentina, when mortgage liabilities were converted

to the rapidly devaluing peso. As was also the case with public-private partnerships for infrastructure, devaluation of the exchange rate created an untenable situation in the local mortgage market, with costly disruptions to long-term market development. These difficulties are significant but should not be seen as reasons to avoid liberalization altogether. They are reasons for proceeding with caution, recognizing that local circumstances in both the financial sector and real estate markets must figure strongly in strategies to navigate a sensitive but necessary transition.

Concluding Remarks

The tensions that urbanization creates and the structural shifts it puts into motion suggest why developing country policy makers do not always welcome rapid urbanization. Viewed from the long perspective of history, urbanization is necessary for achieving high growth and high incomes. In its early stages urbanization is beneficial, but it can also be painful. Managing urbanization will affect politics, social norms, institutional change, and the broader financial system. Policymaking in this environment is rife with problems of the second best. Shaping strategies that make cities work for the national economy will demand pragmatism and sensitivity to what is viable in a given context, but such strategies will reap large rewards.

Annex 1: Results from UN Inquiry among Governments on Population and Development, Various Years

The following tables are from *World Population Policies 2007*, published by the United Nations Department of Economic and Social Affairs/Population Division.

Table A1.1 Government Views on the Spatial Distribution of the Population: 1976, 1986, 1996, and 2007

A. By level of development								
	(Number of countries)				(Percentage)			
Year	Major change desired	Minor change desired	Satisfactory	Total	Major change desired	Minor change desired	Satisfactory	Total
World								
1976	78	55	17	150	52	37	11	100
1986	75	71	18	164	46	43	11	100
1996	80	57	55	192	42	30	29	100
2007	100	66	29	195	51	34	15	100
More developed regions								
1976	4	19	11	34	12	56	32	100
1986	3	18	13	34	9	53	38	100
1996	11	15	22	48	23	31	46	100
2007	18	19	12	49	37	39	24	100
Less developed regions								
1976	74	36	6	116	64	31	5	100
1986	72	53	5	130	55	41	4	100
1996	69	42	33	144	48	29	23	100
2007	82	47	17	146	56	32	12	100
Least developed countries								
1976	27	15	0	42	64	36	0	100
1986	26	22	0	48	54	46	0	100
1996	30	12	6	48	63	25	13	100
2007	32	16	2	50	64	32	4	100

Table A1.1 (continued)

B. By major area								
	(Number of countries)				(Percentage)			
Year	Major change desired	Minor change desired	Satisfactory	Total	Major change desired	Minor change desired	Satisfactory	Total
Africa								
1976	36	12	0	48	75	25	0	100
1986	34	17	0	51	67	33	0	100
1996	33	13	6	52	63	25	12	100
2007	39	12	2	53	74	23	4	39
Asia								
1976	14	19	4	37	38	51	11	100
1986	11	24	3	38	29	63	8	100
1996	17	18	11	46	37	39	24	100
2007	24	17	6	47	51	36	13	100
Europe								
1976	2	17	10	29	7	59	34	100
1986	2	15	12	29	7	52	41	100
1996	10	13	20	43	23	30	47	100
2007	17	16	11	44	39	36	25	100
Latin America and the Caribbean								
1976	22	4	1	27	81	15	4	100
1986	24	8	1	33	73	24	3	100
1996	16	7	10	33	48	21	30	100
2007	13	14	6	33	39	42	18	100
North America								
1976	0	1	1	2	0	50	50	100
1986	0	1	1	2	0	50	50	100
1996	0	0	2	2	0	0	100	100
2007	0	1	1	2	0	50	50	100
Oceania								
1976	4	2	1	7	57	29	14	100
1986	4	6	1	11	36	55	9	100
1996	4	6	6	16	25	38	38	100
2007	7	6	3	16	44	38	19	100

Table A1.2 Government Policies on Internal Migration into Urban Agglomerations: 1976, 1986, 1996, and 2007

	A. By level of development									
	(Number of countries)					(Percentage)				
Year	Raise	Maintain	Lower	No intervention	Total	Raise	Maintain	Lower	No intervention	Total
					World					
1976	4	0	39	40	83	5	0	47	48	100
1986	2	1	50	41	94	2	1	53	44	100
1996	3	5	55	60	123	2	4	45	49	100
2007	5	5	112	50	172	3	3	65	29	100
					More developed regions					
1976	2	0	11	7	20	10	0	55	35	100
1986	1	1	8	9	19	5	5	42	47	100
1996	3	3	8	17	31	10	10	26	55	100
2007	2	2	17	23	44	5	5	39	52	100
					Less developed regions					
1976	2	0	28	33	63	3	0	44	52	100
1986	1	0	42	32	75	1	0	56	43	100
1996	0	2	47	43	92	0	2	51	47	100
2007	3	3	95	27	128	2	2	74	21	100
					Least developed countries					
1976	0	0	11	15	26	0	0	42	58	100
1986	0	0	7	19	26	0	0	27	73	100
1996	0	0	17	17	34	0	0	50	50	100
2007	0	0	32	11	43	0	0	74	26	100

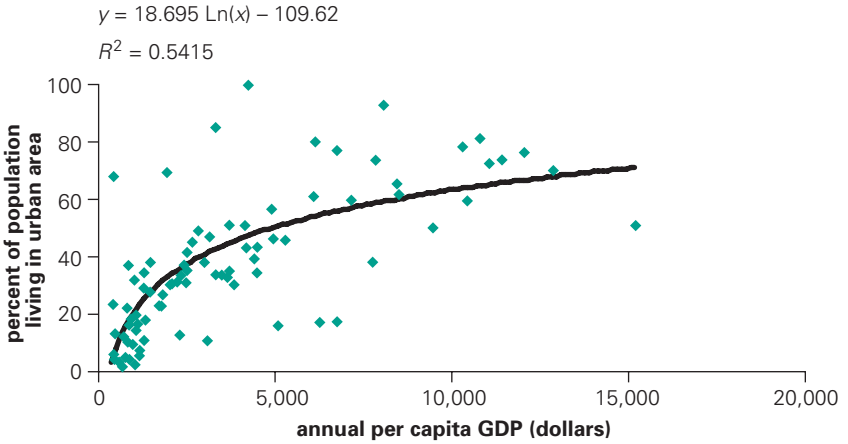
Table A1.2 (continued)

A. By level of development										
	(Number of countries)					(Percentage)				
Year	Raise	Maintain	Lower	No intervention	Total	Raise	Maintain	Lower	No intervention	Total
Africa										
1976	0	0	18	19	37	0	0	49	51	100
1986	0	0	16	17	33	0	0	48	52	100
1996	0	1	22	18	41	0	2	54	44	100
2007	0	0	36	10	46	0	0	78	22	100
Asia										
1976	1	0	4	0	5	20	0	80	0	100
1986	1	0	12	6	19	5	0	63	32	100
1996	0	0	18	9	27	0	0	67	33	100
2007	3	3	30	6	42	7	7	71	14	100
Europe										
1976	2	0	11	6	19	11	0	58	32	100
1986	1	1	8	6	16	6	6	50	38	100
1996	3	3	7	13	26	12	12	27	50	100
2007	2	2	15	20	39	5	5	38	51	100
Latin America and the Caribbean										
1976	1	0	6	13	20	5	0	30	65	100
1986	0	0	13	6	19	0	0	68	32	100
1996	0	0	8	15	23	0	0	35	65	100
2007	0	0	21	10	31	0	0	68	32	100
North America										
1976	0	0	0	1	1	0	0	0	100	100
1986	0	0	0	2	2	0	0	0	100	100
1996	0	0	0	2	2	0	0	0	100	100
2007	0	0	0	2	2	0	0	0	100	100
Oceania										
1976	0	0	0	1	1	0	0	0	100	100
1986	0	0	1	4	5	0	0	20	80	100
1996	0	1	0	3	4	0	25	0	75	100
2007	0	0	10	2	12	0	0	83	17	100

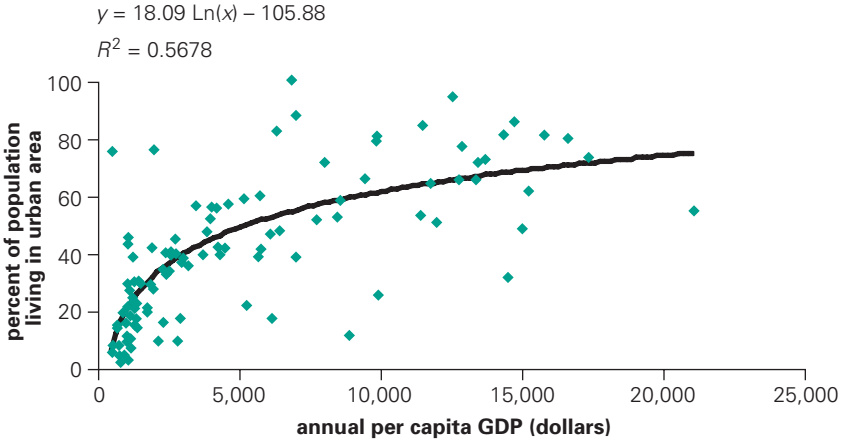
Annex 2: Urbanization Rates and Per Capita GDP, 1960–2000 (1996 Dollars)

Figure A2.1 Urbanization and Per Capita GDP across Countries, 1960–2000 (1996 Dollars)

a. 1960



b. 1970



c. 1980

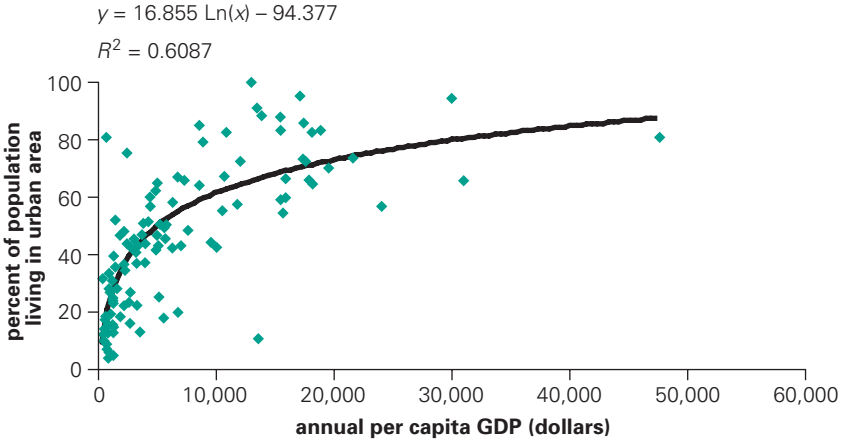
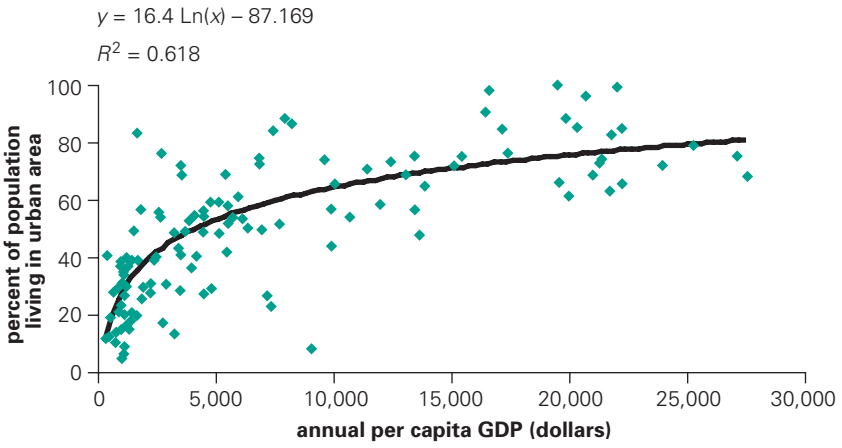
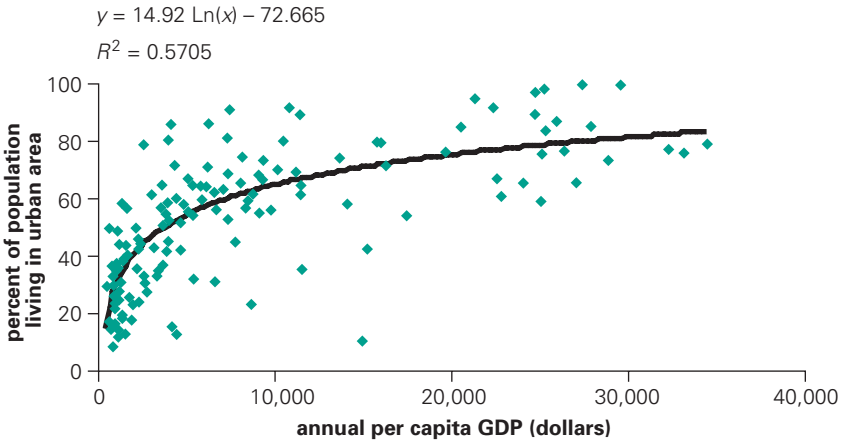


Figure A2.1 (continued)

d. 1990

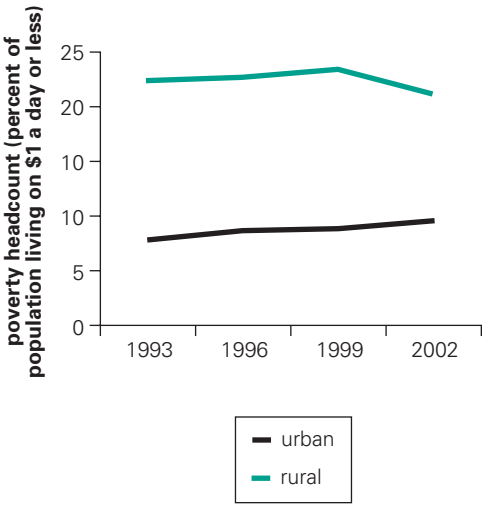


e. 2000



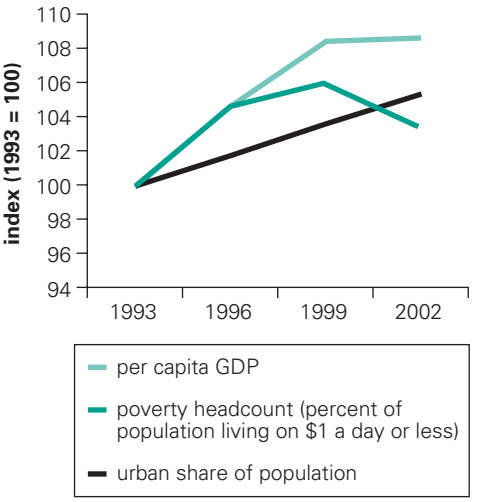
Annex 3: Regional Poverty Incidence in Urban and Rural Areas, by World Region, 1993–2002

Figure A3.1 Poverty Headcount in Latin America and the Caribbean, 1993–2002



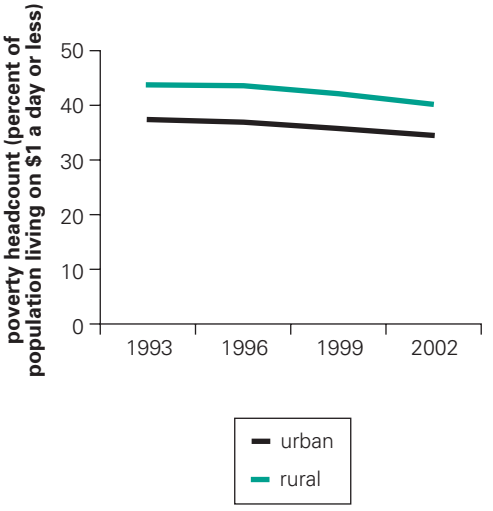
Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.2 Poverty Headcount, Urban Share of Population, and Per Capita GDP Indexes for Latin America and the Caribbean, 1993–2002



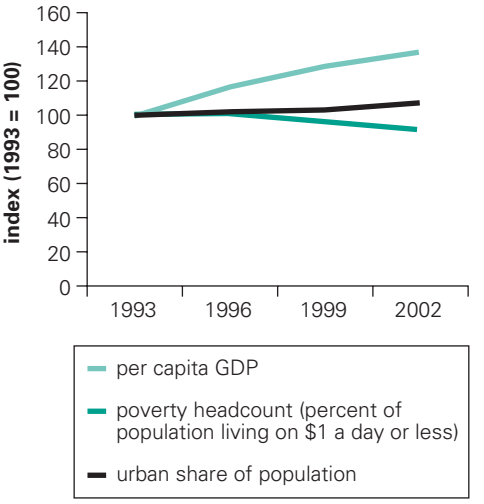
Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.3 Poverty Headcount in South Asia, 1993–2002



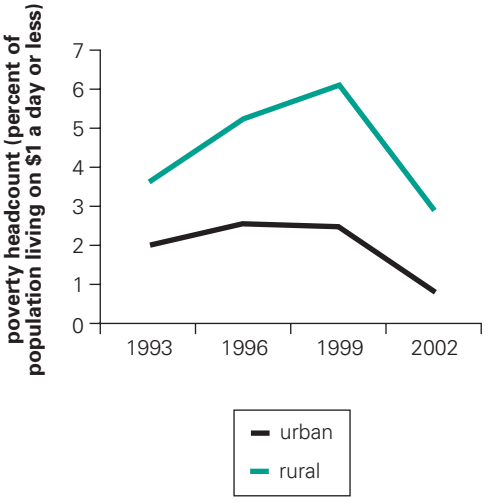
Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.4 Poverty Headcount, Urban Share of Population, and Per Capita GDP Indexes for South Asia, 1993–2002



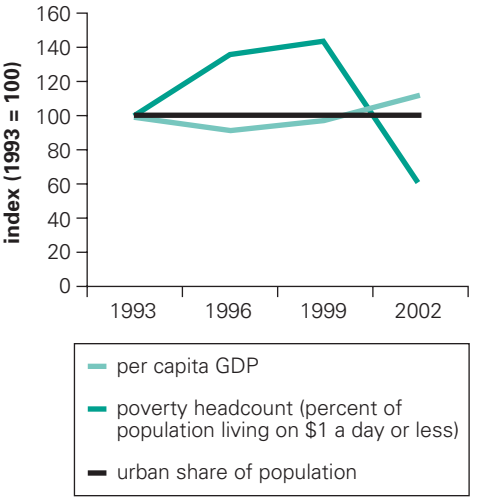
Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.5 Poverty Headcount in Europe and Central Asia, 1993–2002



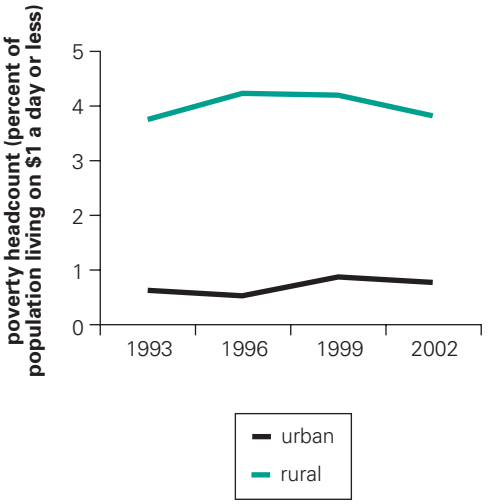
Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.6 Poverty Headcount, Urban Share of Population, and Per Capita GDP Indexes for Europe and Central Asia, 1993–2002



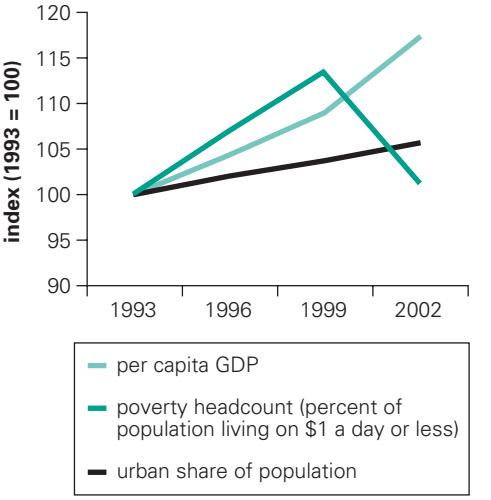
Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.7 Poverty Headcount in the Middle East and North Africa, 1993–2002



Source: Ravallion, Chen, and Sangraula, 2007.

Figure A3.8 Poverty Headcount, Urban Share of Population, and Per Capita GDP Indexes for the Middle East and North Africa, 1993–2002



Source: Ravallion, Chen, and Sangraula, 2007.

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