



The Urban Revolution

Rapid urbanization may prove a blessing, provided the world takes notice and plans accordingly

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THE YEAR 2008 will mark a watershed in the complex and ongoing urban revolution. For the first time in history, more than 50 percent of the world's people will live in urban areas (see Chart 1). And the current rate of urbanization is such that, if it holds, the urban share of the global population could reach 60 percent by 2030, according to UN projections.

Many view the attainment of a 50 percent urban global population as a positive development. They see the move from the countryside to cities as a natural result of the modernization and industrialization of societies and point out many upsides of urban life, which range from increased average income to improved health. Others are less enthusiastic. Critics view urbanization not as a natural process but as one that results from a bias toward cities in government policies and investment, a bias that presses people to migrate from the countryside in search of jobs. The negative evaluation is bolstered by evidence of the downsides of urbanization, such as heightened crime and the growth of slums. Given current and projected global trends in urbanization, understanding and resolving these opposing viewpoints is key to creating effective programs and policies for economic development in the decades ahead.

The dynamics of urbanization

If the trend of recent decades continues, most of the growth in urban areas will occur in developing countries (see "The March of the Cities" on page 18). In more developed regions, the number of people living in urban areas will rise only slightly in the next 25 years, while the less developed regions will experience a particularly sharp rate of increase in this number (see Chart 2).

But here a word of caution is necessary on interpreting these data. Governments designate areas as "urban" on the

basis of disparate criteria—such as administrative benchmarks, population density, or the composition of economic activity—and sometimes do not distinguish urban from rural at all. UN definitions are useful, but they primarily aggregate these disparate measures.

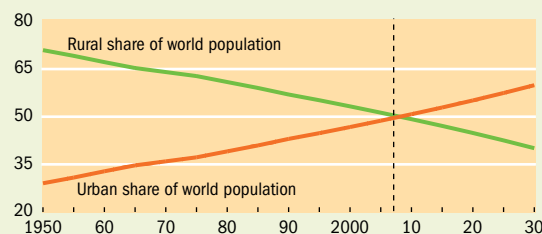
Even so, there is much that we can say about the process of urbanization and its effects. To begin with, we know that urbanization occurs via three distinct routes. The most visible growth is generated by migration from rural to urban areas—witness China's recent urbanization, which has been driven largely by such migration. Second, urban populations may grow through "natural increase"—that is, the growth of the existing urban population—and the UN estimates that this accounts for 60 percent of urban growth. Third,

Chart 1

Tipping the scale

Next year, for the first time in history, more people will be living in urban than in rural areas.

(percent)



Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2006 Revision* (2007).

urbanization can occur with the reclassification of rural areas as urban as a result of population growth.

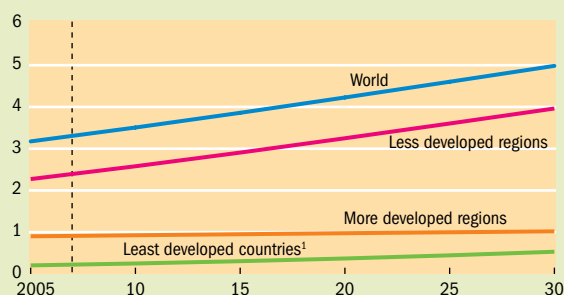
We also know that the urbanization process has been uneven. Some cities attract more migrants than others. Although 84 percent of the world's urban population lives in small and intermediate-sized cities, the remainder lives in large cities or in "megacities" (more than 10 million inhabitants). Although the number of megacities has increased significantly over the past 30 years, slightly less than 5 percent of the world's population resides in such cities (see Chart 3). Still more impressive is the predicted growth over the next decade of a category known as "metacities"—agglomerations with more than 20 million inhabitants. The Tokyo metropolitan area already has more than 35 million inhabitants, and it is likely to be joined in this category by Mumbai, São Paulo, and Mexico City by 2015 (see table).

Chart 2

Unequal growth

Most future growth in urban areas will occur in developing countries.

(urban population, billions)



Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2006 Revision* (2007).

Note: This graph is based on current definitions of more and less developed regions. Some countries will move into the more developed category over time, so this graph would look quite different in 2030 if this fact could be taken into account.

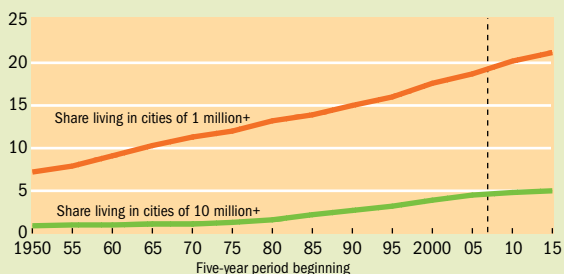
¹The least developed countries, as defined by the UN General Assembly in 2003, include 34 in Africa, 10 in Asia, 1 in Latin America and the Caribbean, and 5 in Oceania.

Chart 3

The emergence of megacities

Despite their size, megacities are home to only about 5 percent of the world's population.

(share of world population, percent)



Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2005 Revision* (2006).

The problems of urbanization may be magnified in megacities, particularly if urbanization is rapid. Providing jobs, housing, sanitation, transport facilities, education, and health care is a complex task for rich countries and harder still for the developing nations now experiencing the sharpest rise in the number of megacities.

Finally, there are a number of economic, social, and political factors that underpin urbanization, particularly migration to cities. These include, for individual migrants, the search for employment (or higher-paying employment), a better quality of life in terms of health and education, and a greater diversity of entertainment and lifestyle options. Migrants may be influenced by the portrayal of urban life in the media or by the success of relatives who have previously moved to urban centers. Urbanization is also linked to changes at the national level, such as the concentration of government and foreign investment in urban areas, as well as social processes such as declines in fertility.

What motivates urban optimists

Those who view urbanization in developing countries as beneficial point to several factors. First, they note that *many benefits of urbanization accrue to individuals*. Among the most important is the income differential, in which urban incomes tend to be higher than those in rural areas. In China, for example, average household income in cities is almost three times greater than in rural households.

Other factors that improve quality of life may also be more prevalent in cities than in the country. For example, government programs can be applied more efficiently in urban areas

The world's largest urban agglomerations

Most of them are in Asia, with Latin America a distant second.

City	Population (2005, millions)	Classification		
		✓ Megacity (10–20 million)	✓ Metacity (>20 million)	
Tokyo, Japan	35.2	✓✓	✓✓	✓✓
Mexico City, Mexico	19.4	✓	✓	✓✓
New York, United States	18.7	✓	✓	✓
São Paulo, Brazil	18.3		✓	✓✓
Mumbai, India	18.2		✓	✓✓
Delhi, India	15.0		✓	✓
Shanghai, China	14.5		✓	✓
Calcutta, India	14.3		✓	✓
Jakarta, Indonesia	13.2		✓	✓
Buenos Aires, Argentina	12.6		✓	✓
Dhaka, Bangladesh	12.4		✓	✓
Los Angeles, United States	12.3		✓	✓
Karachi, Pakistan	11.6		✓	✓
Rio de Janeiro, Brazil	11.5		✓	✓
Osaka-Kobe, Japan	11.3		✓	✓
Cairo, Egypt	11.1		✓	✓
Lagos, Nigeria	10.9		✓	✓
Beijing, China	10.7		✓	✓
Manila, Philippines	10.7		✓	✓
Moscow, Russia	10.7		✓	✓

Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2005 Revision* (2006).

by realizing economies of scale in delivering transportation, communication, water supply, sanitation, and waste management services.

Education systems may be more effective in cities insofar as educated people who can teach in schools and universities are in greater supply. In developing countries, educational enrollment is generally higher in cities than in rural areas, with even urban slums outperforming rural regions. Similarly, female literacy rates are on average 35 percent higher among urban populations than among rural populations. Larger pools of urban health care workers and greater specialization in medical activities—which can lead to higher returns on health care investment—all result in urban residents enjoying generally better health than their rural cousins.

In most urban areas, both desired and actual fertility are relatively low because caring for children when parents work outside the home is more costly, urban housing is more expensive, children have less value in urban household production, and family planning and reproductive health services are more accessible in cities. Individual families with fewer children are in a better position to concentrate their resources on providing each child with a better upbringing, strengthening the child's economic prospects later in life.

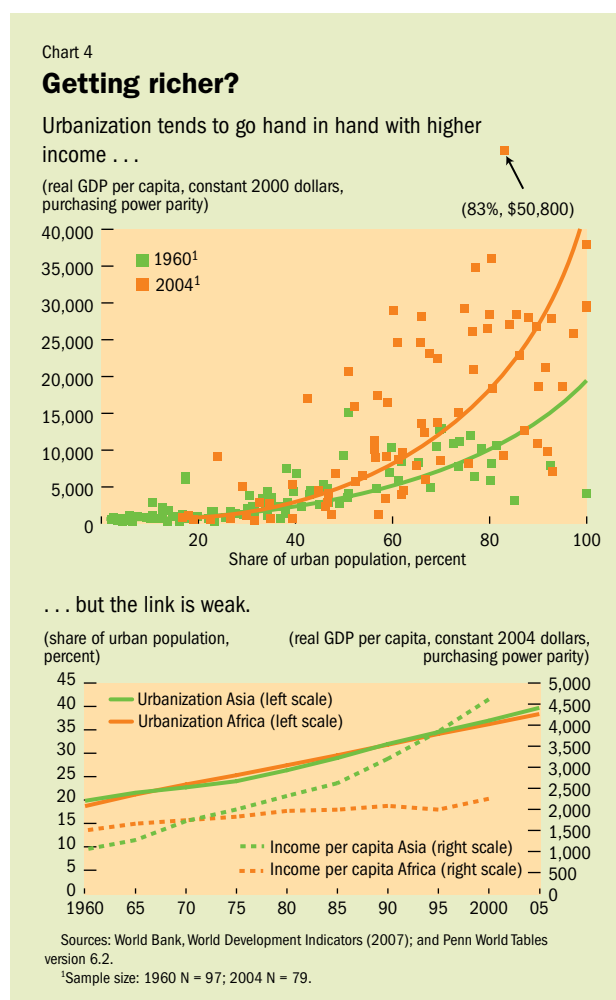
Second, the optimists say that *urbanization has positive outcomes at the national level*. Urbanization is a natural part of the transition from low-productivity agriculture to higher-productivity industry and services. Cities attract businesses and jobs, and the concentration of industries and services in turn encourages productivity growth. And there are other routes to enhanced productivity. For example, with increased opportunities for division of labor (because of higher population density and the variety of jobs provided by industry), intraindustry specialization in specific activities becomes more likely. Urban firms can learn from others working in the same industry and from their suppliers, and are also closer to their markets and thus better able to respond to changing demand. Relatively cheaper transport combines with this proximity to customers and suppliers to reduce trade costs. And, by aggregating many educated and creative people in one place, cities incubate the new ideas and technologies that accelerate economic progress. In addition, the fact that urban living encourages reduced fertility could support enjoyment of a society-wide “demographic dividend”—as the generation born before fertility declines can do more paid work and save more, thanks to fewer child dependents to support during its prime productive years.

Third, the optimists contend that *urbanization contributes to rural development*. People who migrate to cities often send remittances to their families based in rural areas. Their migration reduces the size of the labor pool available to work in rural areas, so wages there may increase. There is some evidence that urbanization is associated more strongly with poverty reduction in rural than in urban areas, but this is partly because poor rural migrants moving to urban areas increase the proportion of poor people living in cities (see “Urban Poverty” on page 15).

It is uncertain, however, whether all of these apparent benefits actually serve to elevate real GDP per capita. We do find a positive

cross-country association between income and urbanization, as shown in Chart 4 (upper panel), which juxtaposes country-level data on real GDP per capita and the share of the population living in urban areas during 1960 and 2004. But the upward rotation of the association over time indicates that higher incomes were associated with each level of urbanization in 2004 than in 1960. Also, the fact that the curves are initially very flat is consistent with the view that the links between urbanization and income are relatively weak at low levels of development.

Moreover, if urbanization had a major effect on income per capita, one would expect countries or regions that urbanize more rapidly to exhibit concomitantly sharper income growth. But while urbanization in Africa over the past 45 years has been accompanied by sluggish economic growth, in Asia, where urbanization has occurred to a nearly identical extent, economic growth has been rapid (see Chart 4, lower panel). This comparison does not rule out a link between urbanization and economic growth—incomes in Africa may have grown even more slowly without urbanization, for example—but it does suggest that factors other than urbanization are more important determinants of income growth. More detailed studies involving multivariate analysis of cross-country panel data for





Overcrowded train in Mumbai.



Bright lights of Times Square, New York City.



1960 to 2000 cast further doubt on urbanization as a significant determinant of economic growth.

By contrast, a recent World Bank study (Ravallion, Chen, and Sangraula, 2007) provides evidence that is consistent with the view that urbanization leads to a reduction in poverty by promoting economic growth. The analysis takes novel and appropriate account of rural-urban cost-of-living differences and provides compelling evidence that urbanization promotes a decline of absolute poverty rates in both rural and urban areas. However, the authors do not analyze income growth directly, and causality remains unproved.

What worries urban pessimists

Those who view urbanization in developing countries as harmful often point to several factors, including its *impact on the environment and quality of life*. Because of the effects of traffic congestion, concentration of industry, and inadequate waste disposal systems, environmental contamination is generally higher in cities than in the countryside and often well in excess of the local environment's inherent capacity to assimilate waste—which undercuts human health. Cities also make demands on land, water, and natural resources that are disproportionately high in relation to their land area and, because of high income and consumption, their population size as well.

Even though urbanization may increase incomes, it is also linked to *increases in urban poverty*, with the rate of growth of the world's urban poor exceeding the rate of growth of the world's urban population. And inequality within developing world cities is stark. Because quality urban housing is so costly, the urban poor often resort to living in slums, where water and sanitation facilities are inadequate and living conditions are crowded and often unhealthy. The UN estimates that the number of people living in slums passed 1 billion in 2007 and could reach 1.39 billion in 2020, although there are large variations among regions (see Chart 5). Asia has by far the highest number of city dwellers living in slums—the problem is worst in South Asia, where half of the urban population is composed of slum dwellers. But in percentage terms, sub-Saharan Africa leads the pack: about 72 percent of city dwellers in that region live in slums.

In many of these slum communities, open defecation occurs and is severely detrimental to health and aesthetics. Malnutrition in slum areas is much higher than in nonslum urban areas. In Ethiopia, for example, UN-HABITAT reports that slums have child malnutrition rates of 47 percent, while other urban areas have rates of 27 percent. Child mortality is higher and primary education enrollment lower in slums than in nonslum urban districts, and slum dwellers are more vulnerable to environmental disasters and pollution.

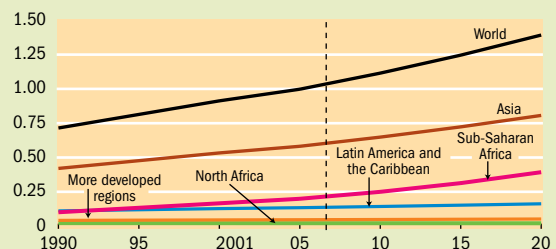
These inequalities often lead to other, sometimes greater, *social problems, such as crime and violent conflict*. The growth in urban populations in developing countries is in large part a growth in the number of young people. The UN Population Fund predicts that, by 2030, 60 percent of those living in urban areas will be under the age of 18. The proportion of young people is particularly high in slum areas, where employment opportunities are limited. This combination of youth and poverty can make for high crime rates. Some demographers have forecast that the increasing concentration of humanity in big cities will lead to major conflicts affecting both urban areas and entire countries.

Chart 5

The growth of slums

More than one in every seven human beings now lives in an urban slum.

(slum population, billions)



Source: UN-HABITAT, Global Urban Observatory database (2005).

Note: Figures for 1995 are interpolated using estimates for 1990 and 2001. Figures for 2005 are projections; Australia, New Zealand, and Japan are included in the more developed regions.



People and traffic along a busy street in Lagos.



Women shopping in a market in Cairo.



Highway through Mexico City.

The future of urbanization

Despite the putative benefits of urbanization, the evidence supports the view that urbanization, especially when its pace is rapid, can impede development and exacerbate environmental problems. Whether or not urbanization plays a major role in economic development, it is clear that, if well managed, it can be a factor in promoting better health and education. And whether urbanization proves to be a boon or a bane may depend on an appropriate devolution of power among different constituencies, including national and regional governments, civil society, and legitimate claimants of private property rights (see “Big, or Too Big?” on page 20). This does not seem to be happening, however (see “What Is the Biggest Challenge in Managing Large Cities?” on page 24).

As for the views of government leaders, a recent UN survey in developing countries reveals that only 14 percent of respondents were satisfied with the urban-rural mix and city-size distribution of their populations. Most of those who were unsatisfied bemoaned the increasing urbanization taking place in their countries. About 73 percent of respondent governments had policies to slow down urbanization, whereas only 3 percent had policies to accelerate the process.

Most policies to reduce urbanization attempt to limit or reverse movement from rural to urban areas, through rural employment schemes or the denial of services to migrants once they reach cities. However, the rapid increase in such migration shows that there is a strong demand for it; policy, at least in the short term, is unlikely to reduce this demand. Bringing migration to a halt reduces would-be migrants’ opportunities to create a better life, risks making them both poorer and more resentful, and violates their rights. It also limits the potential for rural areas to benefit from remittances. And it may be futile. Migrants tend to be ingenious at finding ways to move to and survive in cities, whatever the obstacles.

Given that most urban growth in developing countries comes about because of growth among existing urban populations, and not from rural-urban migration, the best bet may be programs that empower women, such as reproductive health programs in urban areas. Better education, gender-sensitive labor laws, and policies that expand employment

opportunities for women are important for reducing fertility, because couples in which the woman has strong career prospects are more likely to desire a smaller family. Family planning and reproductive health services can make it easier for women to achieve this goal. These policies have benefits other than cutting fertility, of course—they also tackle female poverty and improve maternal and child health, thereby improving urban living conditions.

It is likely to be more important to plan for and adapt to increasing urbanization, which has typically not been done enough, than to attempt to prevent it. The reality is that city planning is not a luxury; it is a necessity. Investment in infrastructure is vital if cities are to avoid health and environmental problems and make the most of the economic opportunities cities present. This will not be cheap. The Asian Development Bank estimates that, in Asia alone, trillions of dollars of investment will be needed to develop urban infrastructure to keep up with urbanization rates.

Planning for urbanization will also in many cases require more innovative technological and institutional solutions. Take transport problems, for example, for which cities have devised a number of innovative systems. Fees for using an automobile in congested areas in London and Singapore have helped reduce traffic congestion and pollution. Delhi has cut air pollution in half by requiring autorickshaws and buses to use natural gas. Bangkok has adopted similar policies. And the city of Curitiba in Brazil has pioneered a system, since copied by Quito and Bogotá, in which extra-large buses operate on popular routes along specially designated busways. This creates a system akin to an above-ground subway system at a fraction of the cost, and car traffic has plummeted in Curitiba despite population growth.

Another example is the construction of “environmentally friendly” cities. In China, developers have started building a city near Shanghai that they tout as environmentally friendly—they claim that it will, among other things, generate almost no carbon emissions. Although, when built, Dongtan will make little dent in China’s growing urban and environmental problems, it may be a model for a new approach to greening cities. And, even on the level of indi-

vidual buildings, it is essential to incorporate innovative designs to counteract urban sprawl. In Tokyo, for example, the Roppongi Hills real estate complex combines residential, commercial, and cultural facilities in one space and demonstrates an entrepreneurial role that the private sector can play in planning urban spaces.

Planners should also seek to improve the market for urban land. Many rapidly urbanizing cities in the developing world lack an integrated formal property system or have a system that is plagued with bureaucracy. In turn, the poor often “squat” on land without a formal title. Without legal ownership, the poor are unable to leverage their assets as collateral in exchange for capital to start a business, smooth consumption, or pay for emergency expenses. A leading Peruvian development economist, Hernando De Soto, has argued that formal land ownership through titling can be a catalyst for economic development. To encourage the titling of land, planners might consider liberalizing some elements of land-use regulation, for example, simplifying the process for land titling and registration, as the Asian Development Bank has suggested. Or governments might provide access for very low-income households to affordable land through credit or subsidies for low-income housing. While titling is not a panacea, its increased prevalence will create incentives for disseminating information needed for the creation of a well-functioning urban land market.

Forming an urban planning team

Whom should we count on to do the needed urban planning? UN-HABITAT has argued that it is vital to decentralize power. Central governments too often focus solely on the capital cities in which they are based, ignoring the urbanization process in smaller cities. Vernon Henderson (2002) has noted that in the initial stages of urbanization, it may be economically efficient for industries to congregate in one urban area, because that encourages the creation of appropriate institutions, infrastructure, and a pool of skilled labor. However, at later stages, investment in intercity transport and telecommunications, decentralization of tax-raising power to regional authorities, and measures that aim to boost employment opportunities in other cities may help spread the burden of urbanization from the primary city and make the process more manageable. Of course, there is a need both for capacity building at the regional level to make such devolution productive and for appropriate checks and balances on central and regional authorities.

Some countries have developed regional governance mechanisms to tackle this problem. The United Kingdom, for example, has regional development agencies, which receive funding from the central government and are free to spend on programs they believe will promote employment and economic development in their regions. Other countries, such as China, have built special economic zones, in part to disperse urban populations throughout the country. These zones have more liberal regulatory and tax environments than other areas, which help them to attract businesses and, subsequently, migrants seeking employment.

The power to make decisions about urbanization, or at least to provide input into such decisions, must also reside at levels below regional authorities. If the implementation of infrastructure and other improvements is to be effective, communities on the ground, including slums, should be encouraged to participate. After all, municipalities and district authorities are closer to the needs of the urban population than central governments. Local businesses also have useful local knowledge and will play a key role in job creation. But particularly in areas where the capacity to run government is likely to be weak, institution building may be necessary (and should be part of a development strategy) before decentralization to greater community control over resources becomes feasible.

Continued urbanization in developing countries is inevitable, as demonstrated perhaps best by the futile efforts of governments that have attempted to bring it to a halt. Failing to plan for the growth of urban populations will leave cities vulnerable to its negative effects, including environmental degradation, poor health, and extreme crowding. Active planning, on the other hand, may allow cities to benefit from burgeoning populations of ambitious young workers, with a positive impact on those already living in cities, on new migrants, and on rural communities. The participation of a diverse range of stakeholders is vital for sustainable city planning, and central governments should not delay opening up the decision-making process to at least consultation with, if not direct action by, these stakeholders. ■

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- For references to additional papers cited herein and a short bibliography, see this article on the Internet at www.imf.org/fandd.